

019157-20
1/46

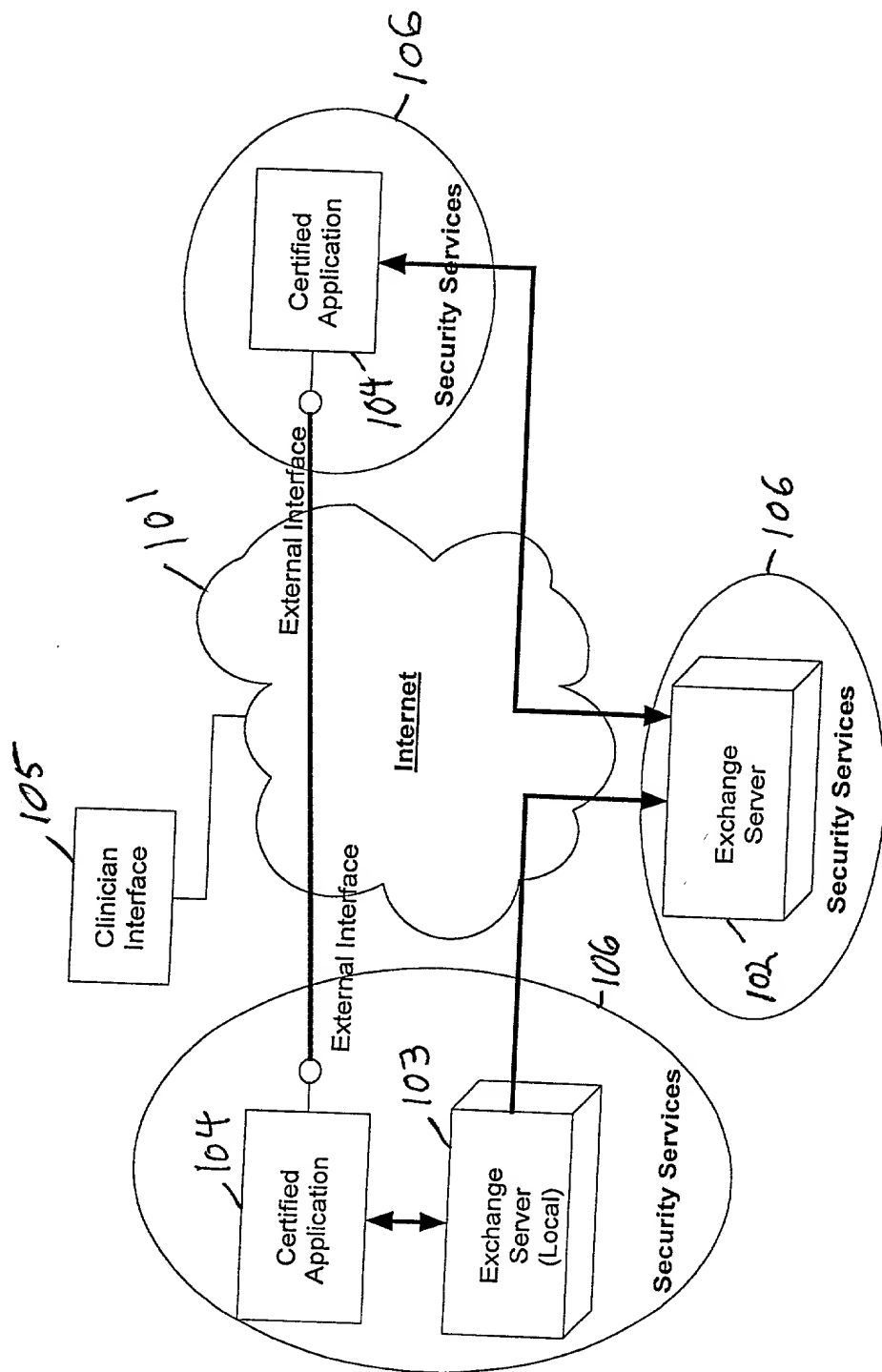


FIG. 1

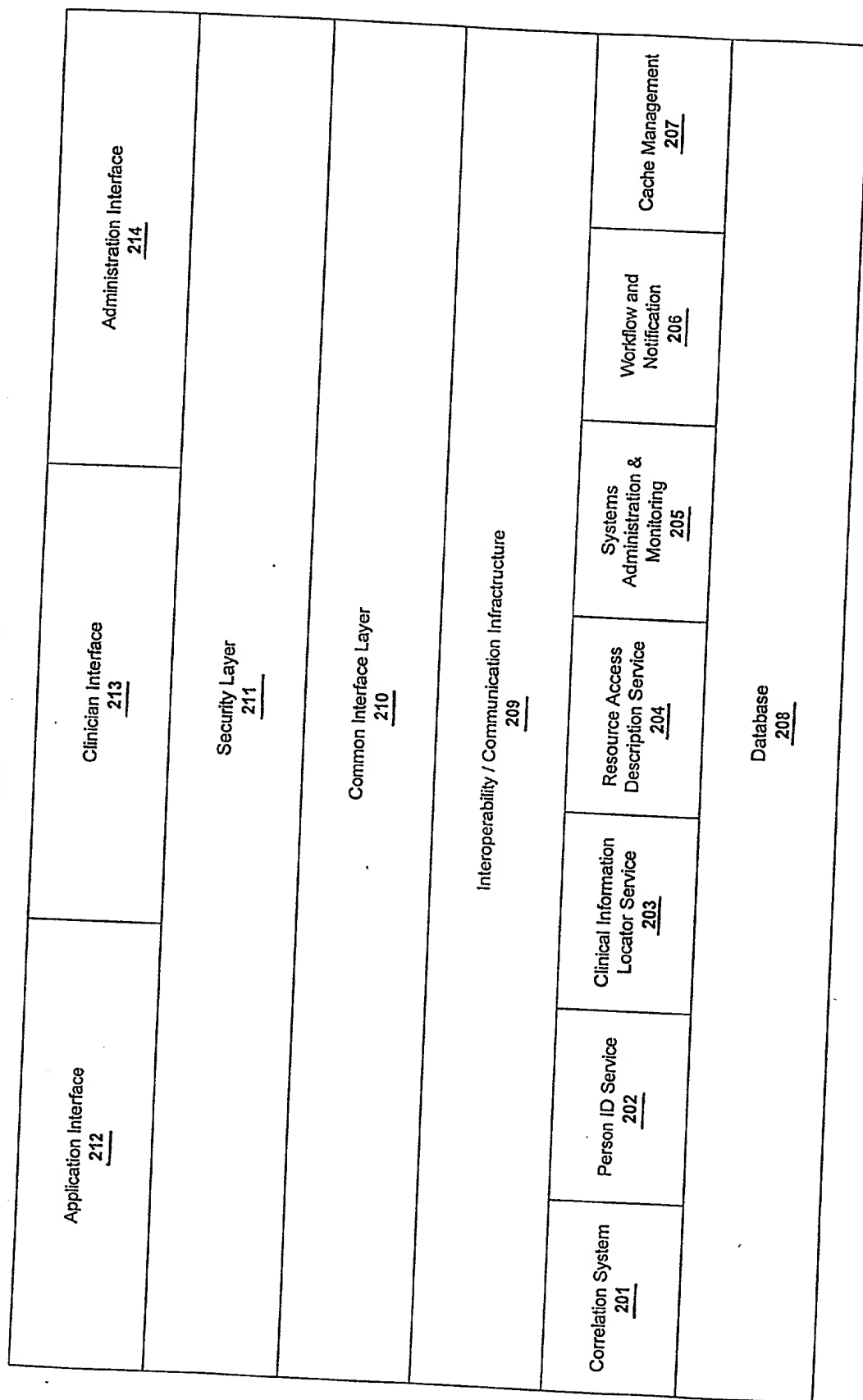


FIG. 2

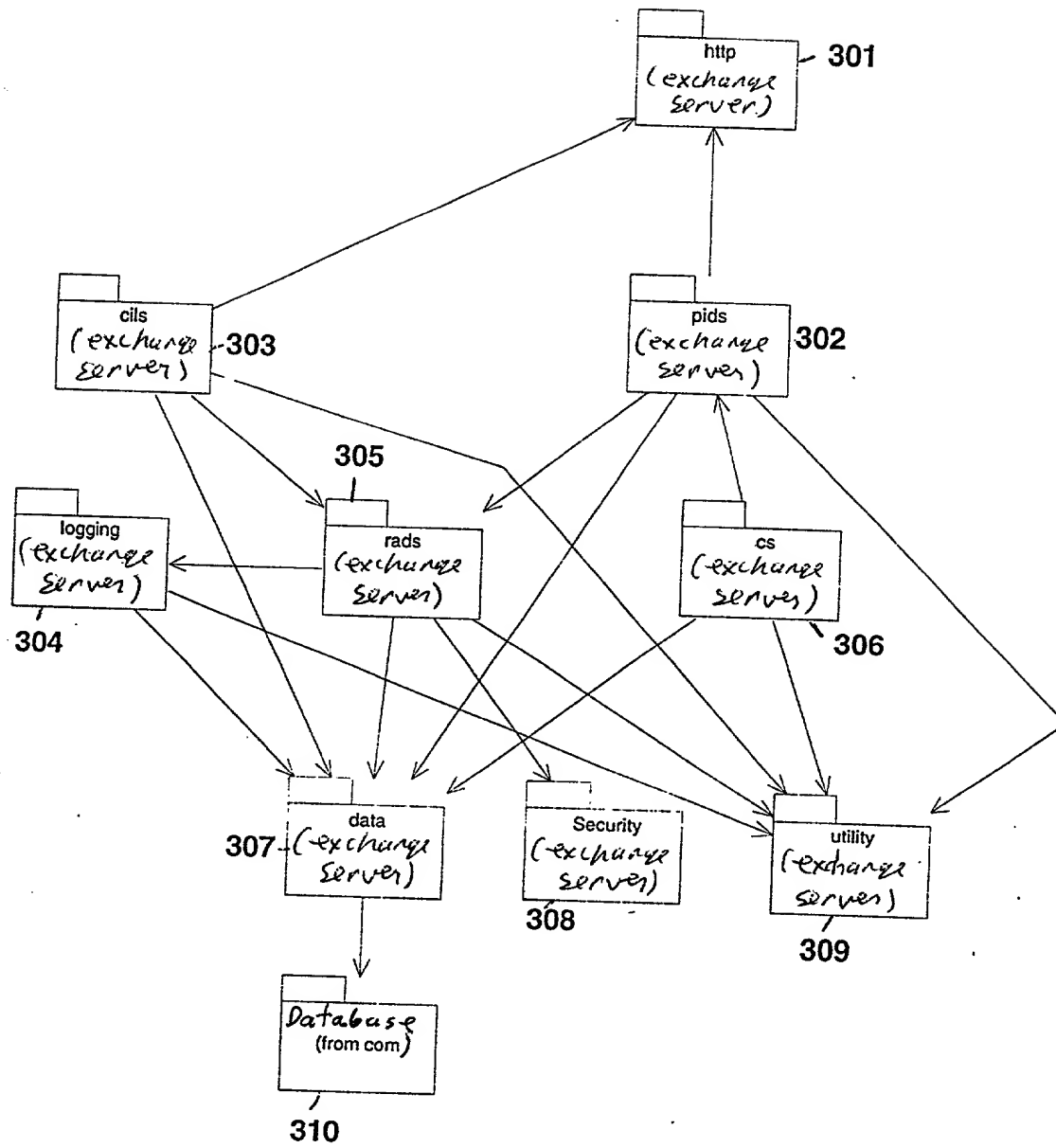


FIG. 3

FIG. 4

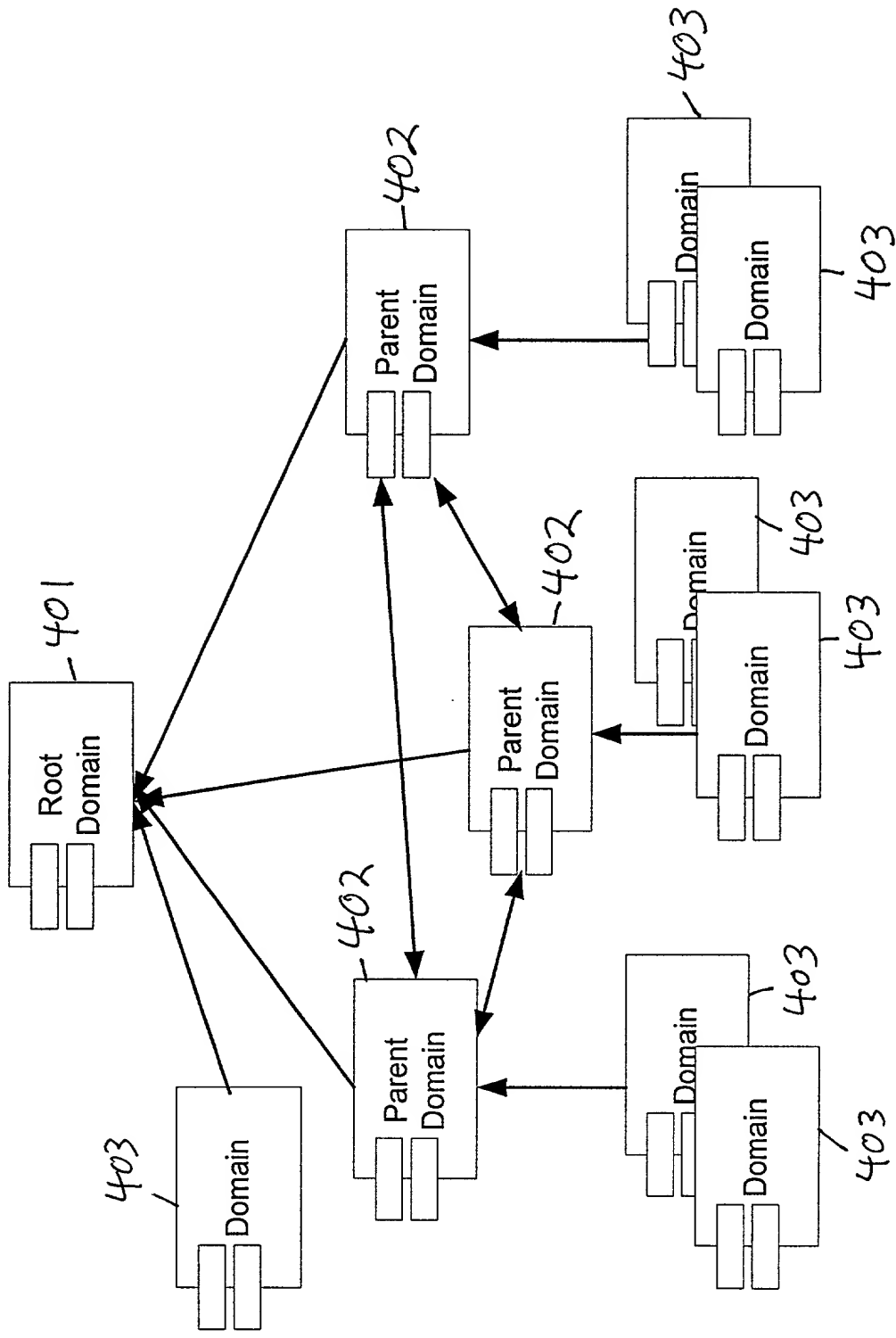


FIG. 4

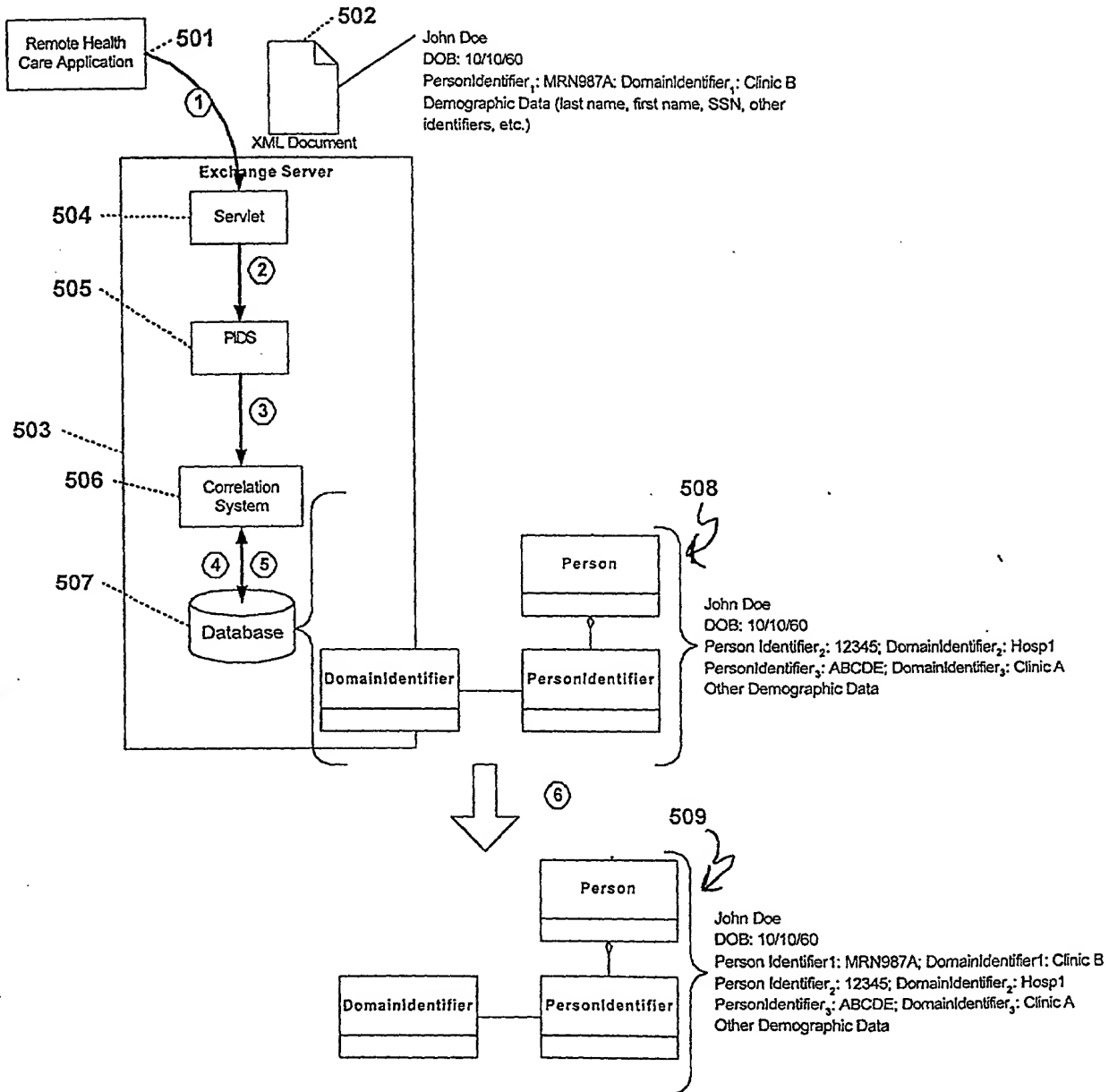


FIG. 5

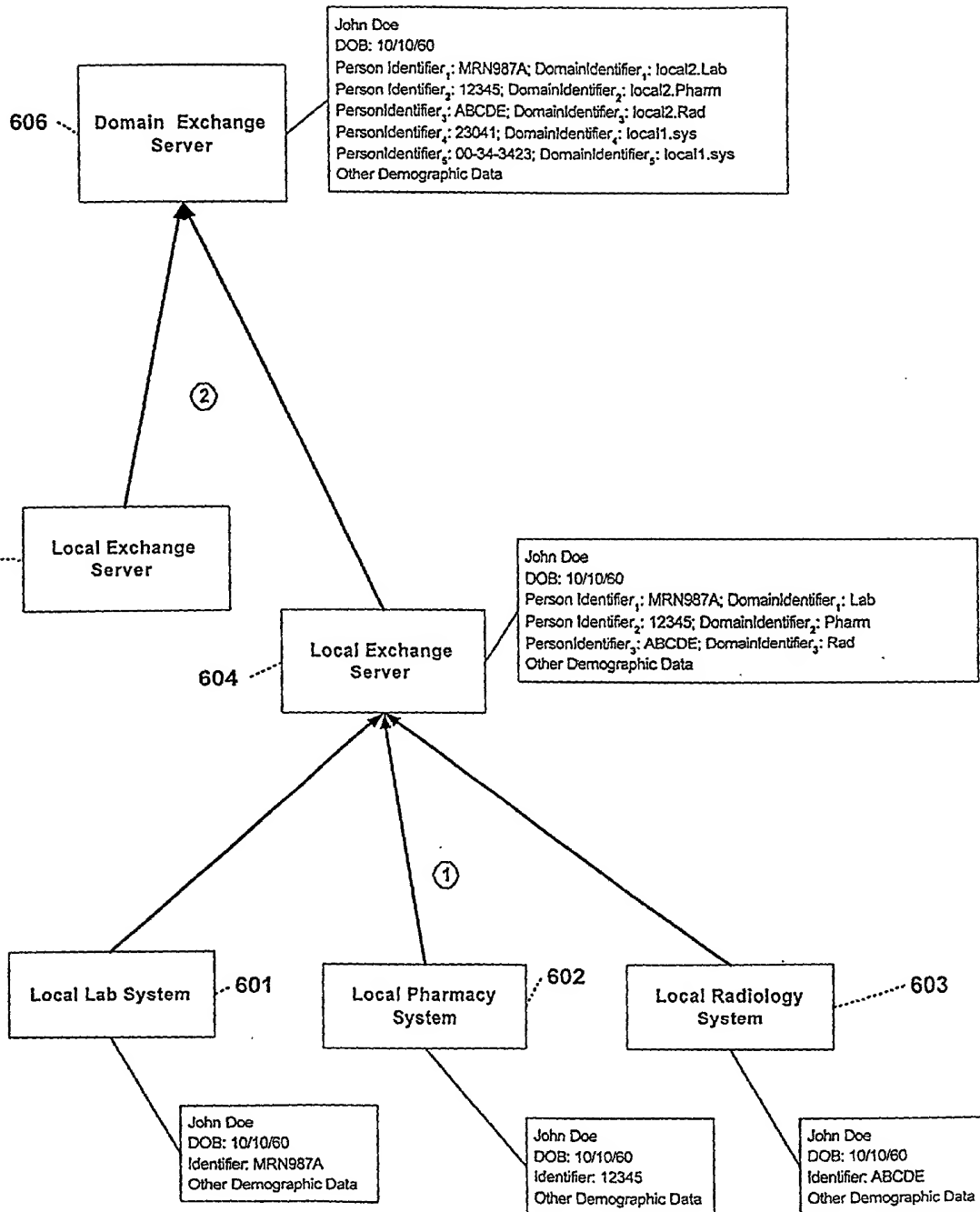


FIG. 6

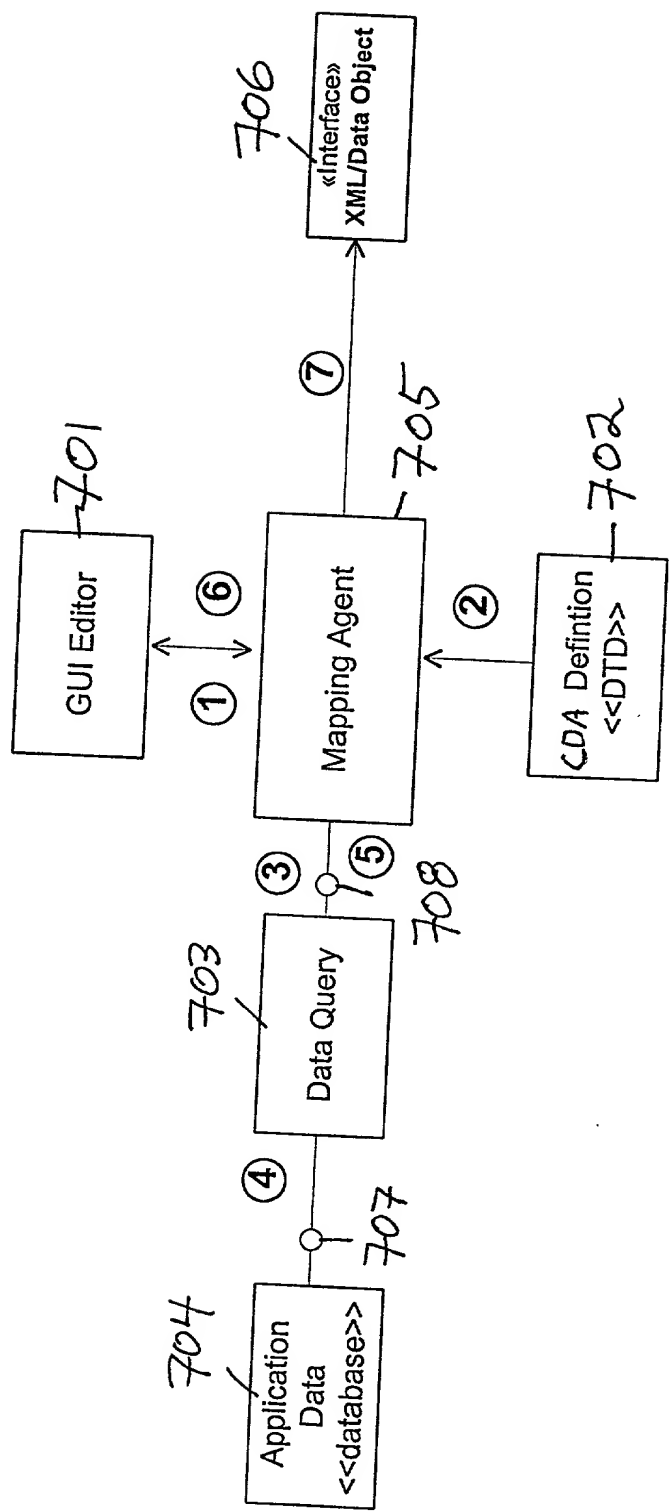


FIG. 7

8/46

FIG. 8

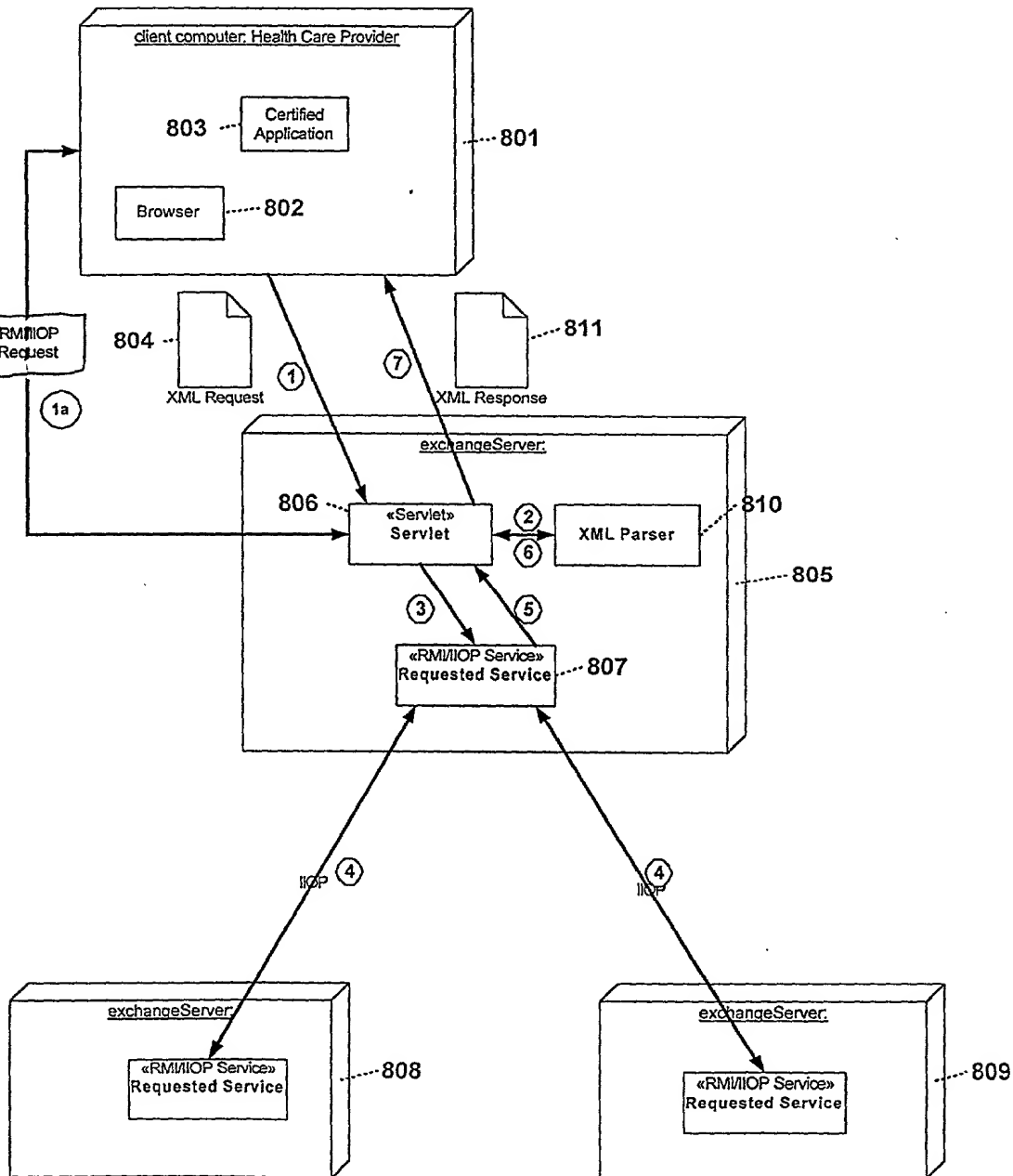


FIG. 8

9/46

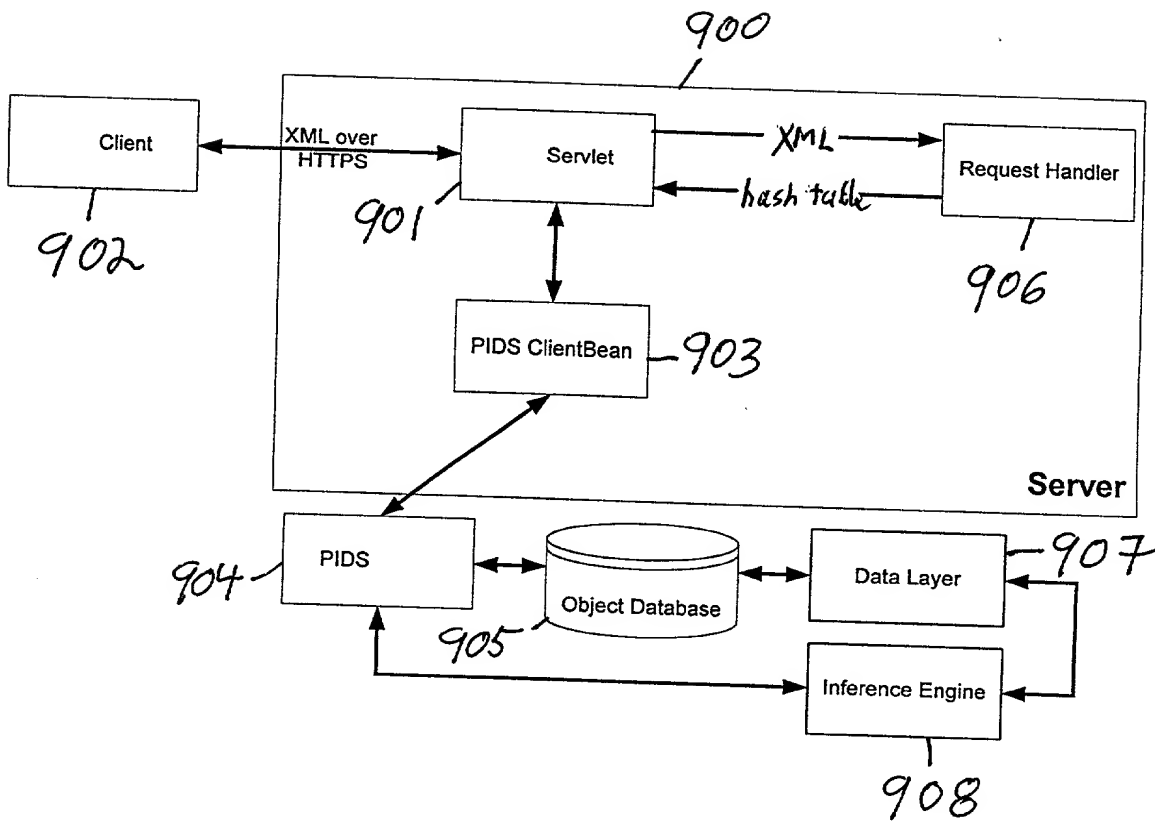


FIG. 9

FIG. 10

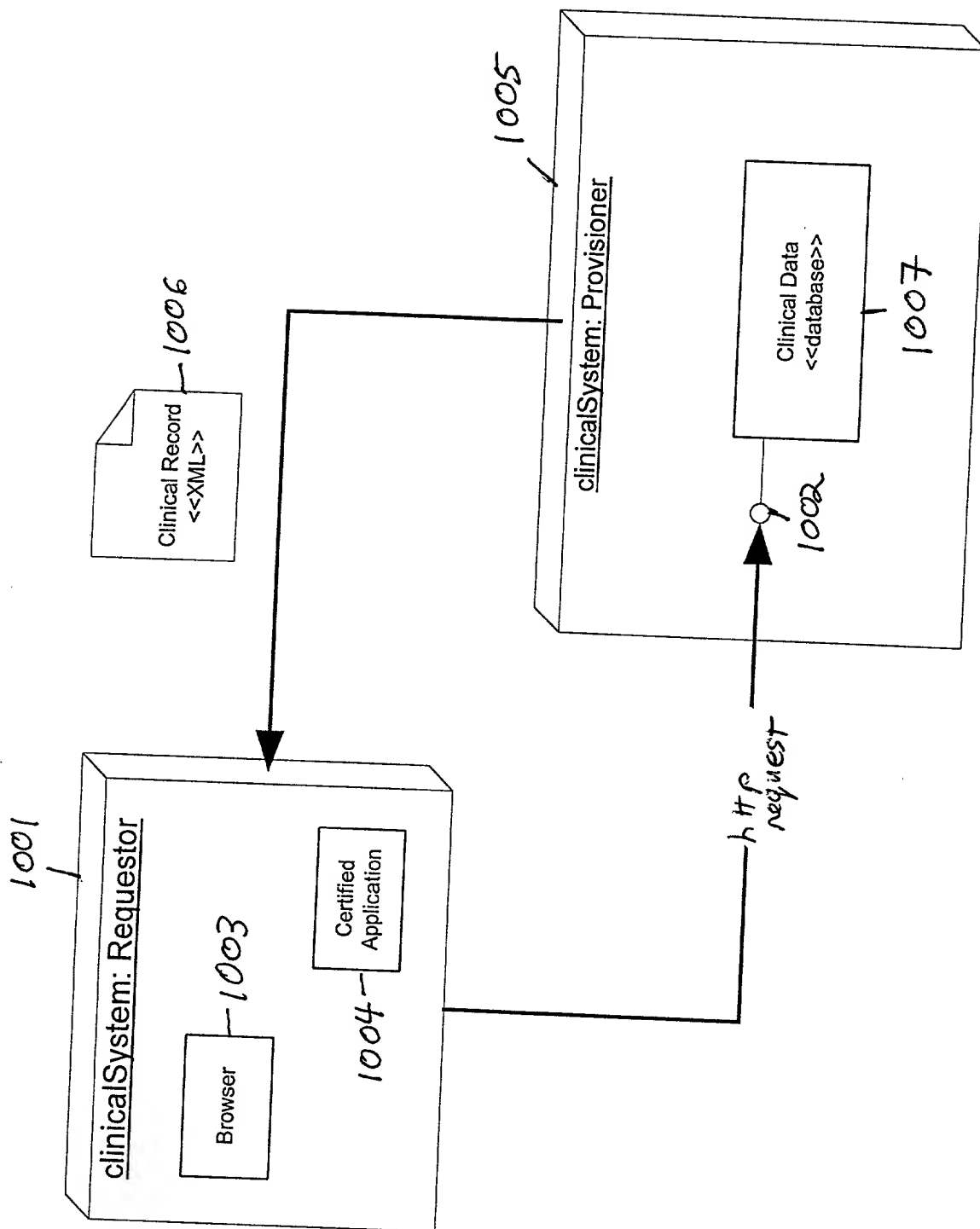


FIG. 10

Patent 9,940,260

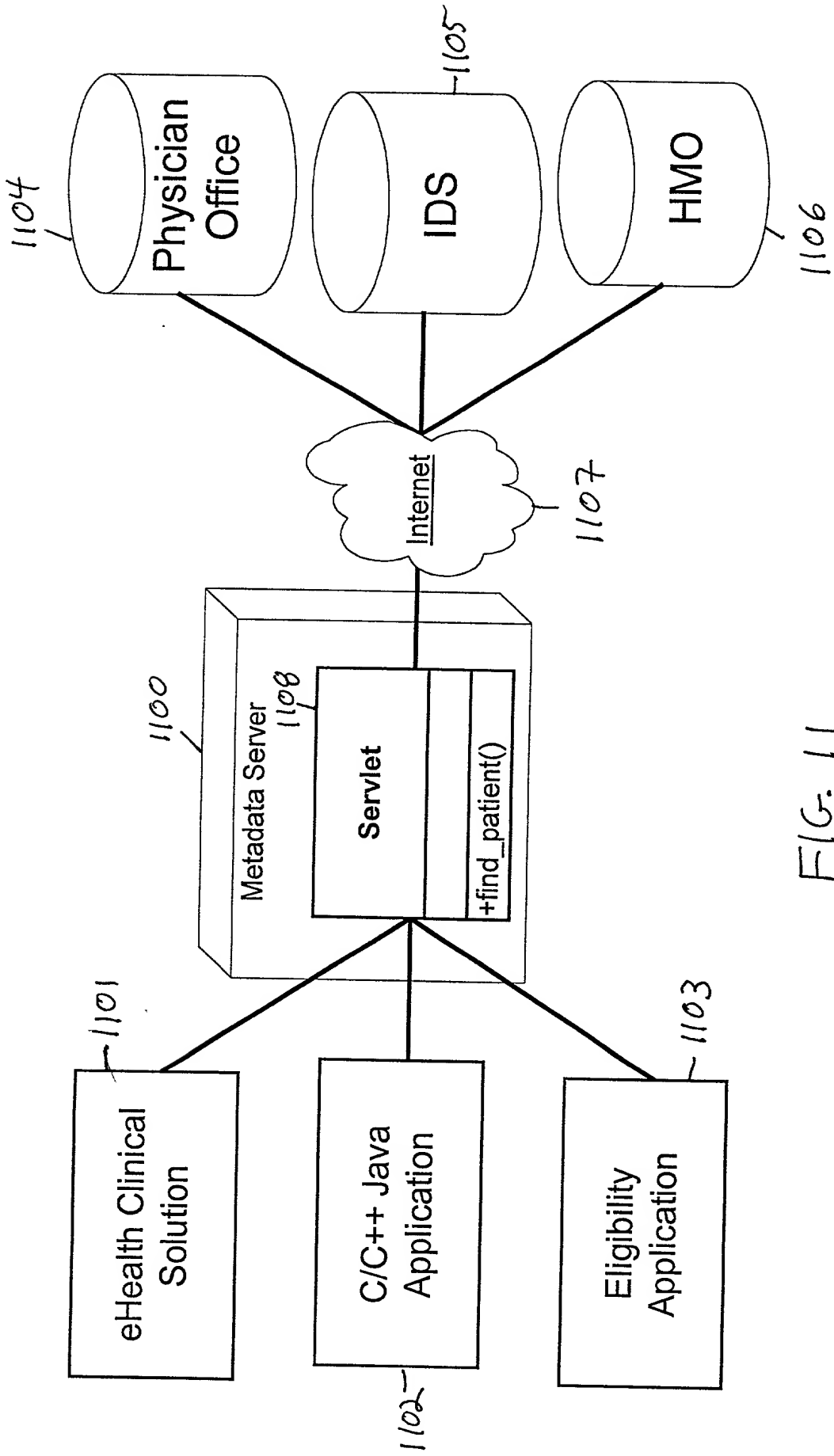


FIG. 11

12/46

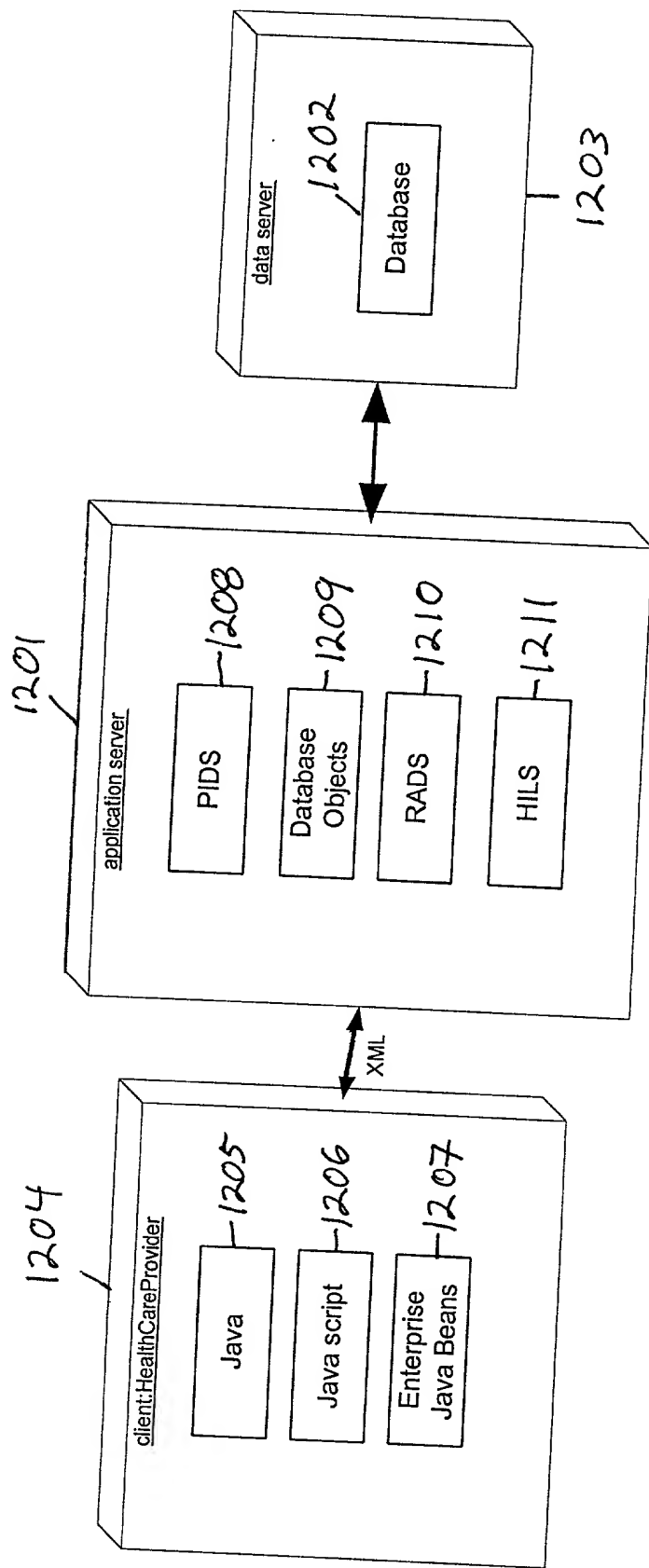


FIG. 12

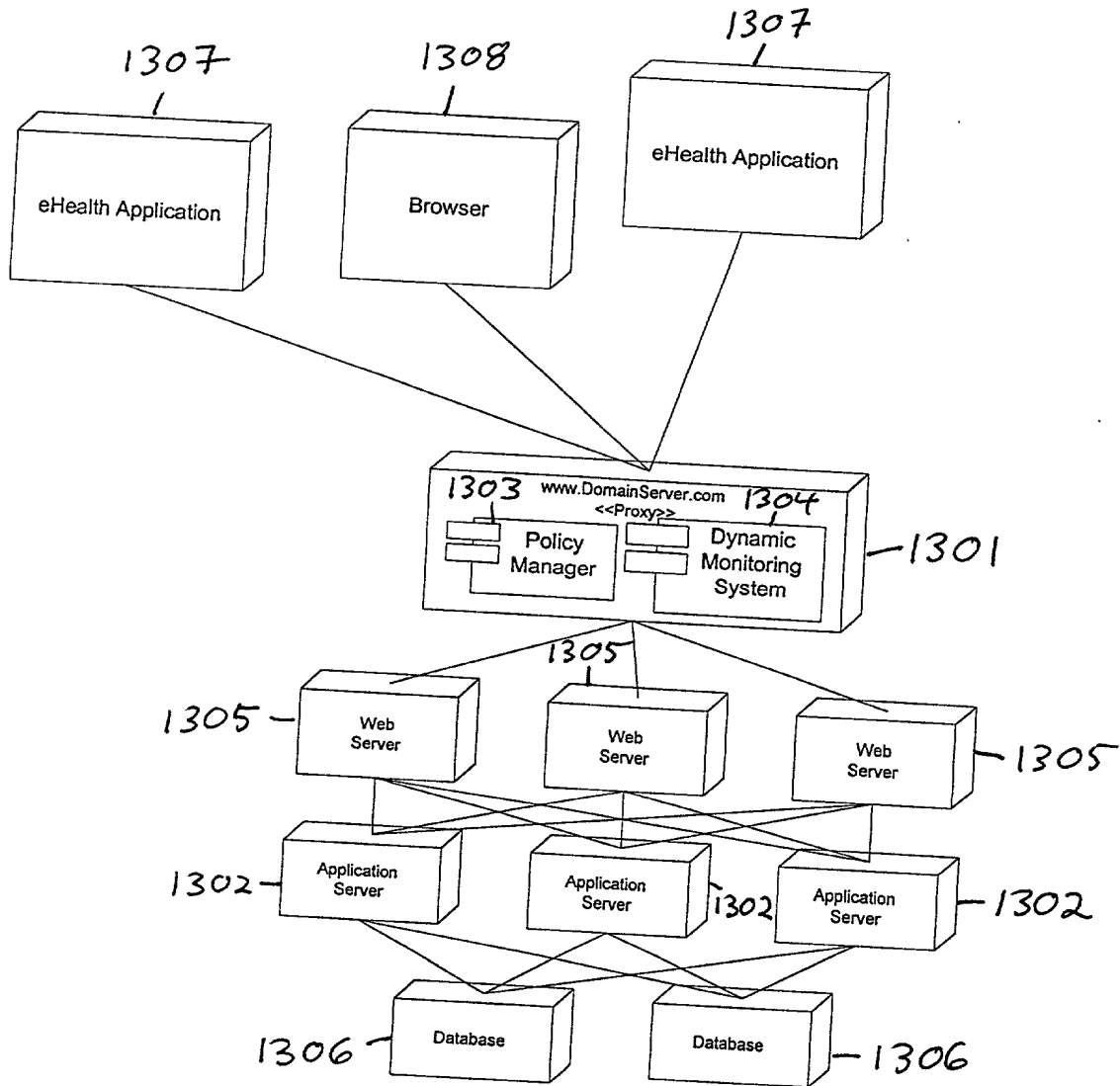


FIG. 13

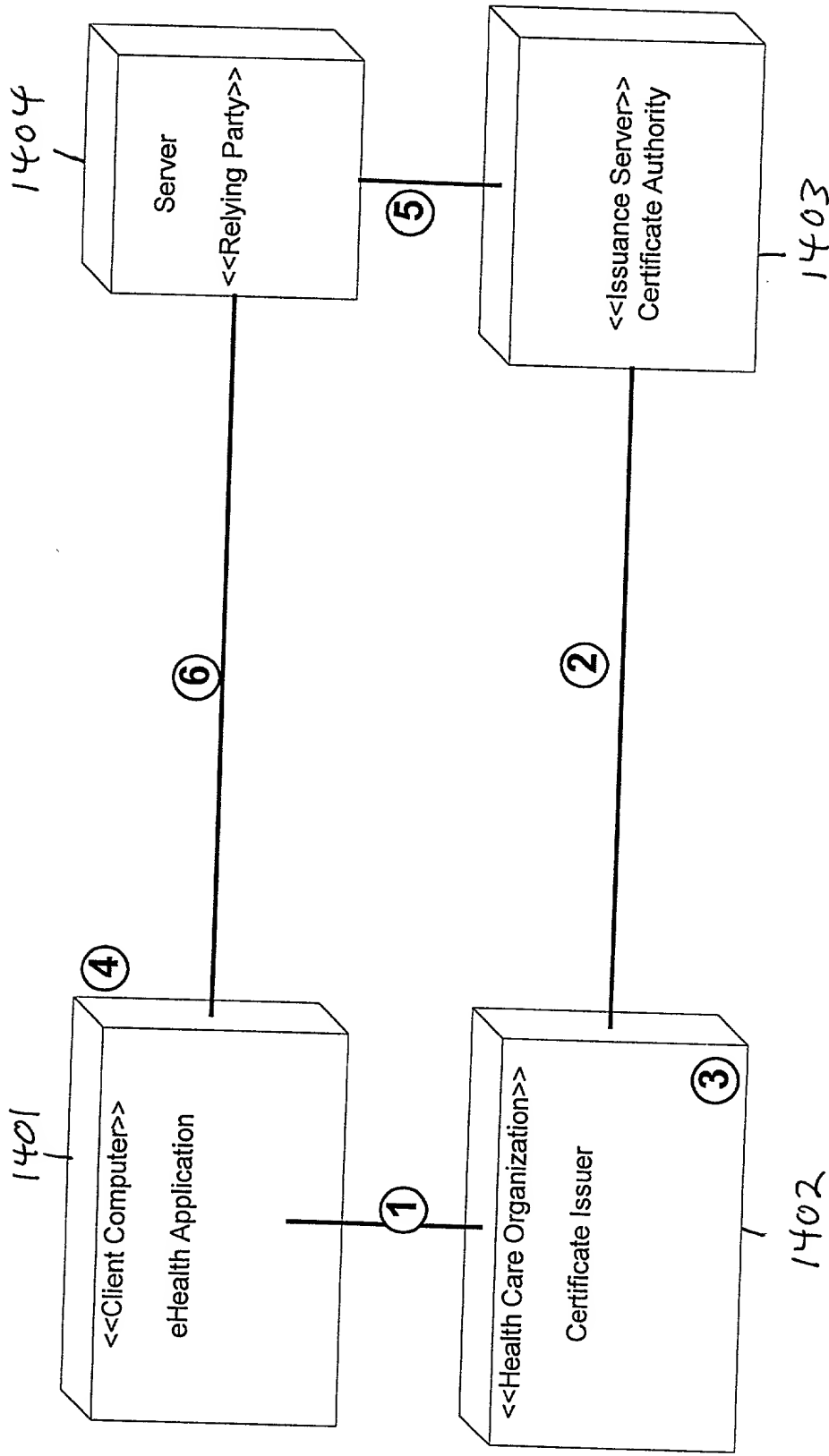


FIG 14

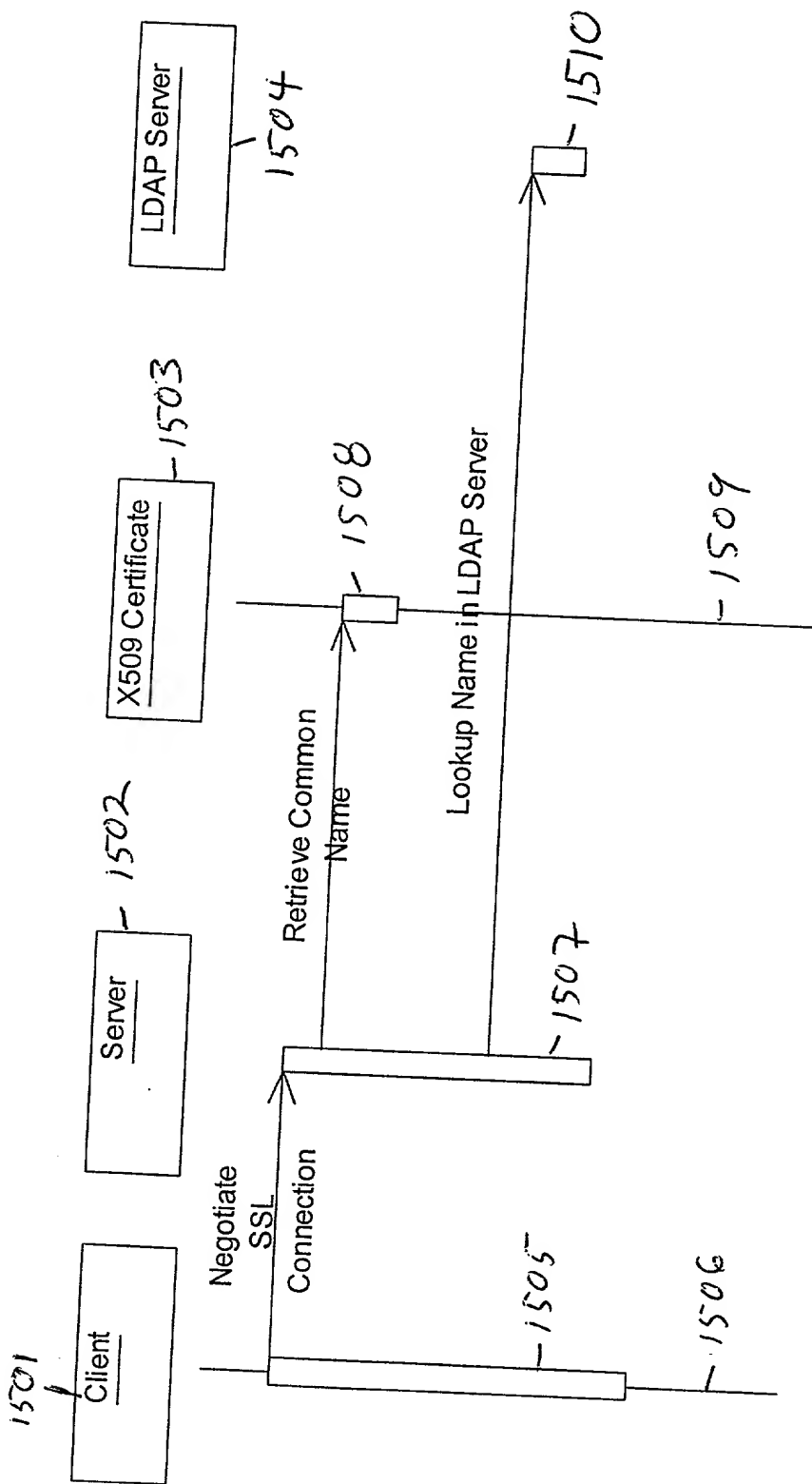


FIG. 15

105213-99-0260

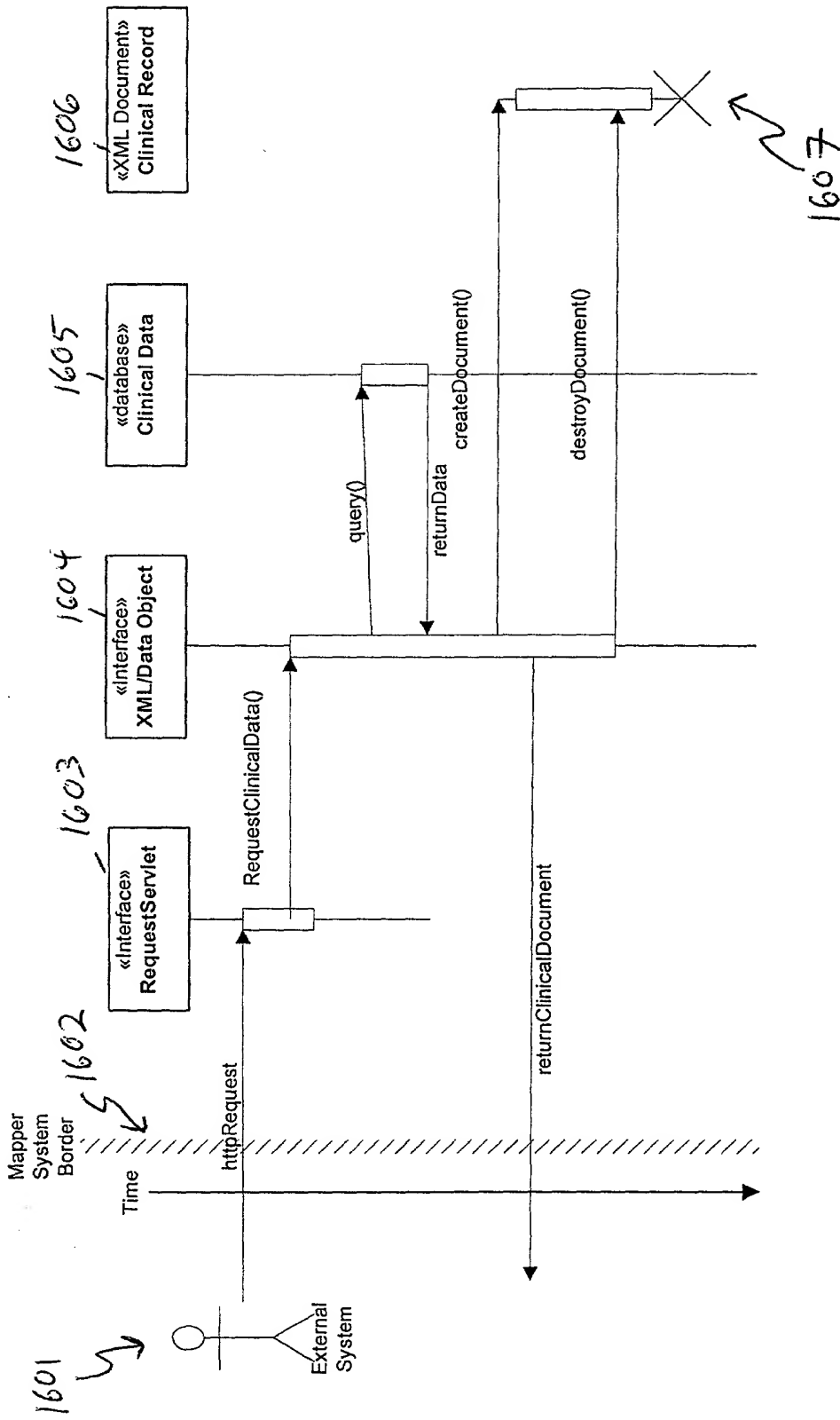


FIG. 16

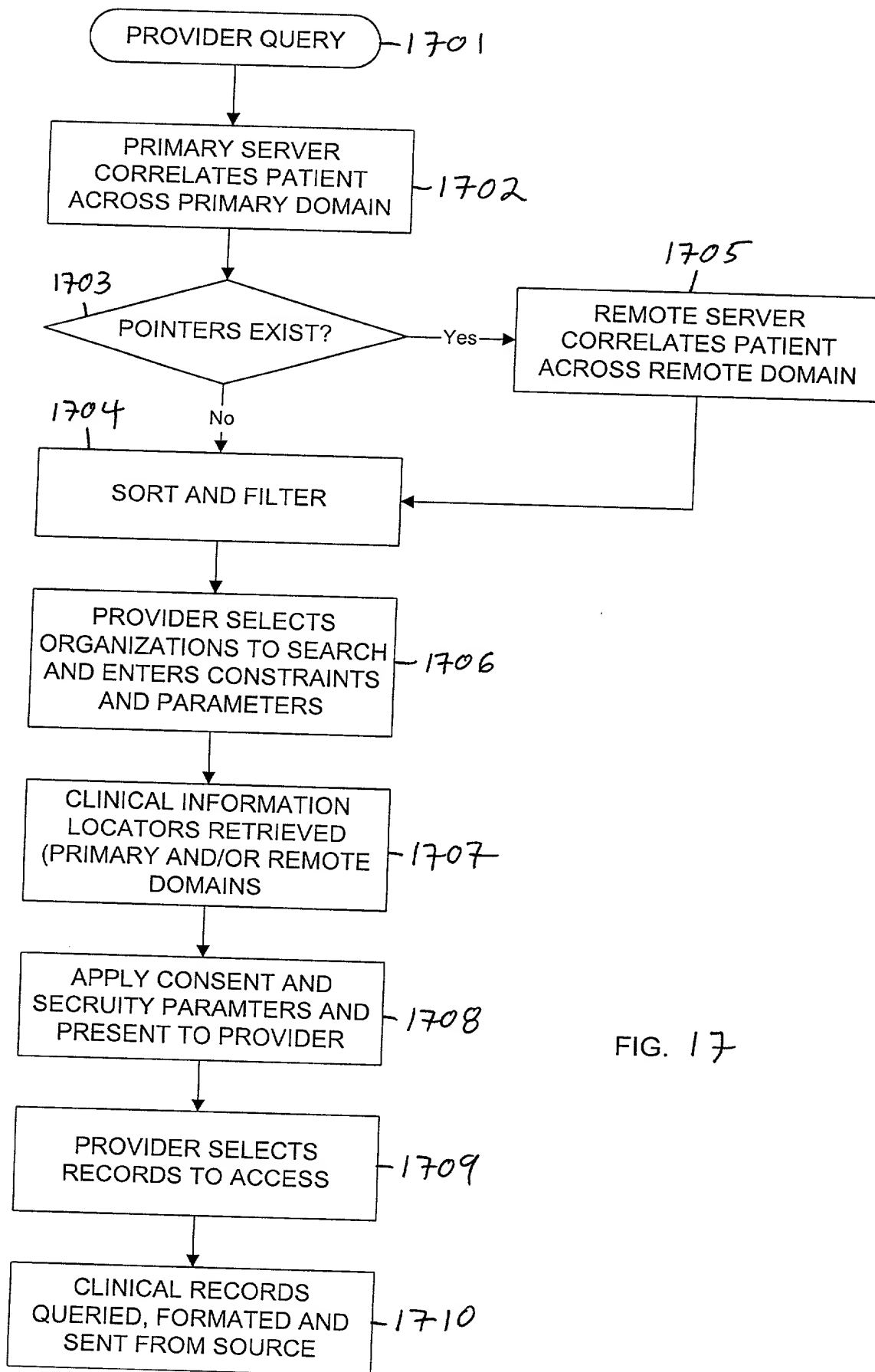


FIG. 17

FIG. 18-46

1801

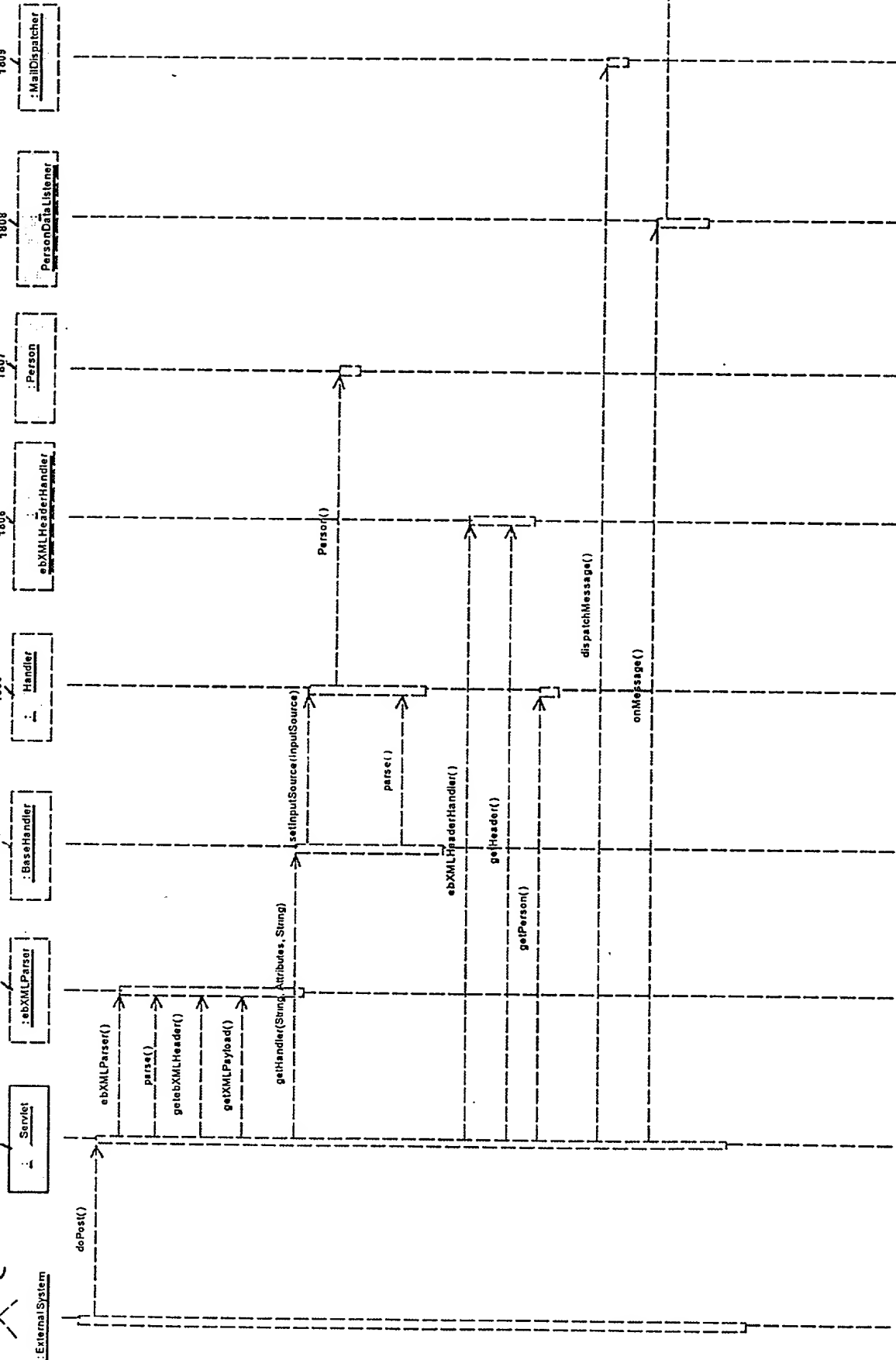


FIG. 18-46

19/46

FIG. 10

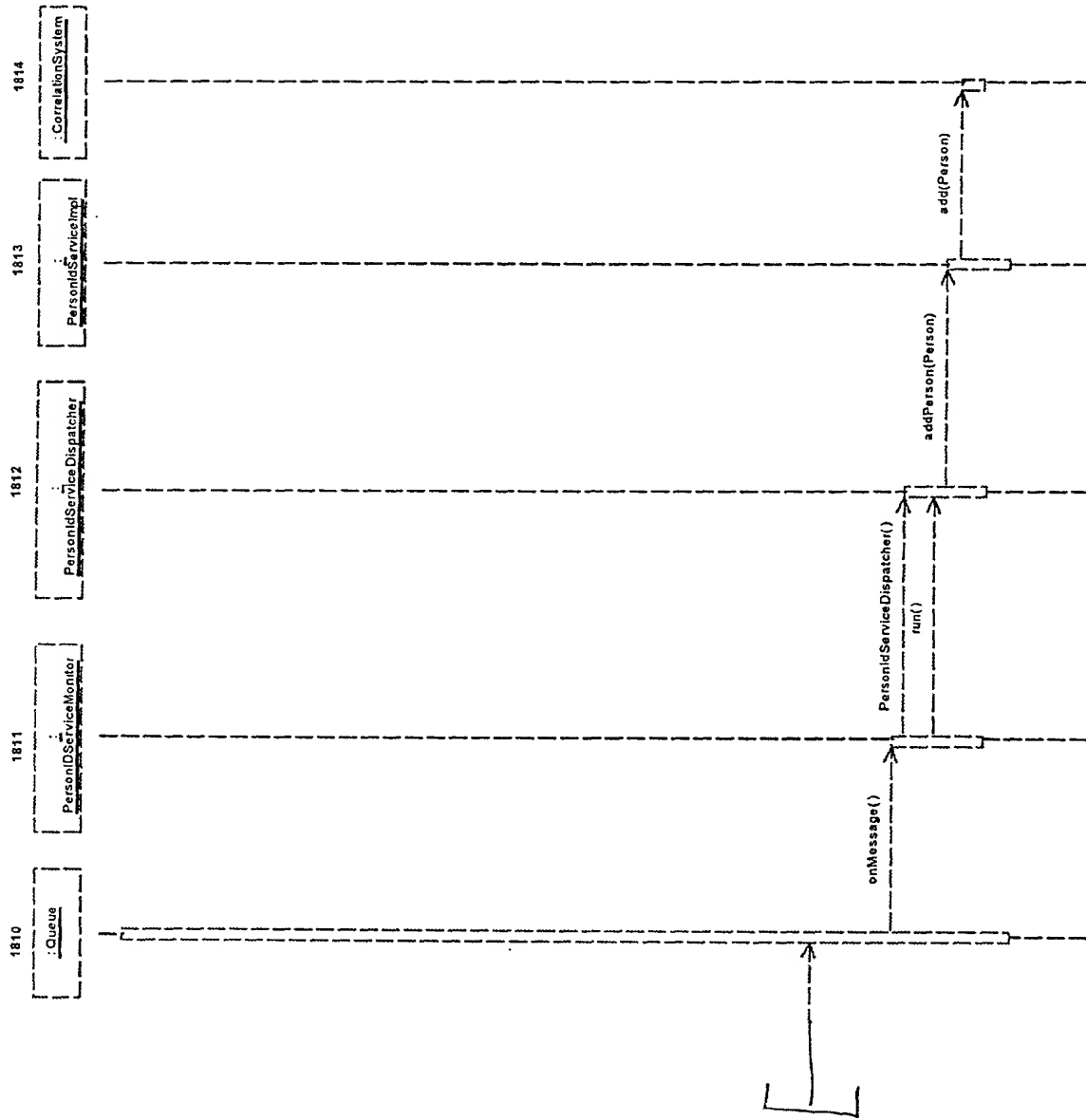


FIG. 10-B

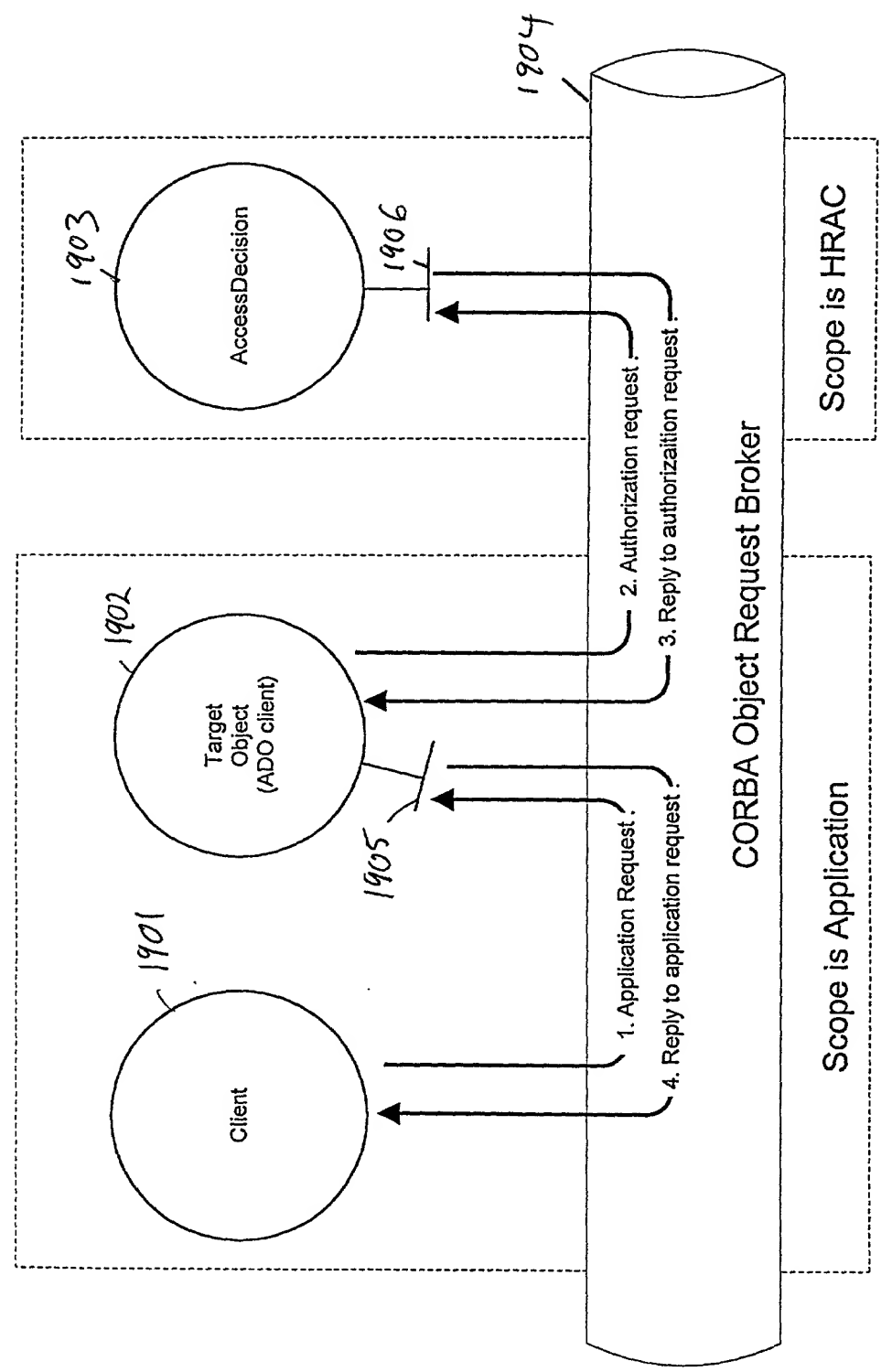


FIG. 19

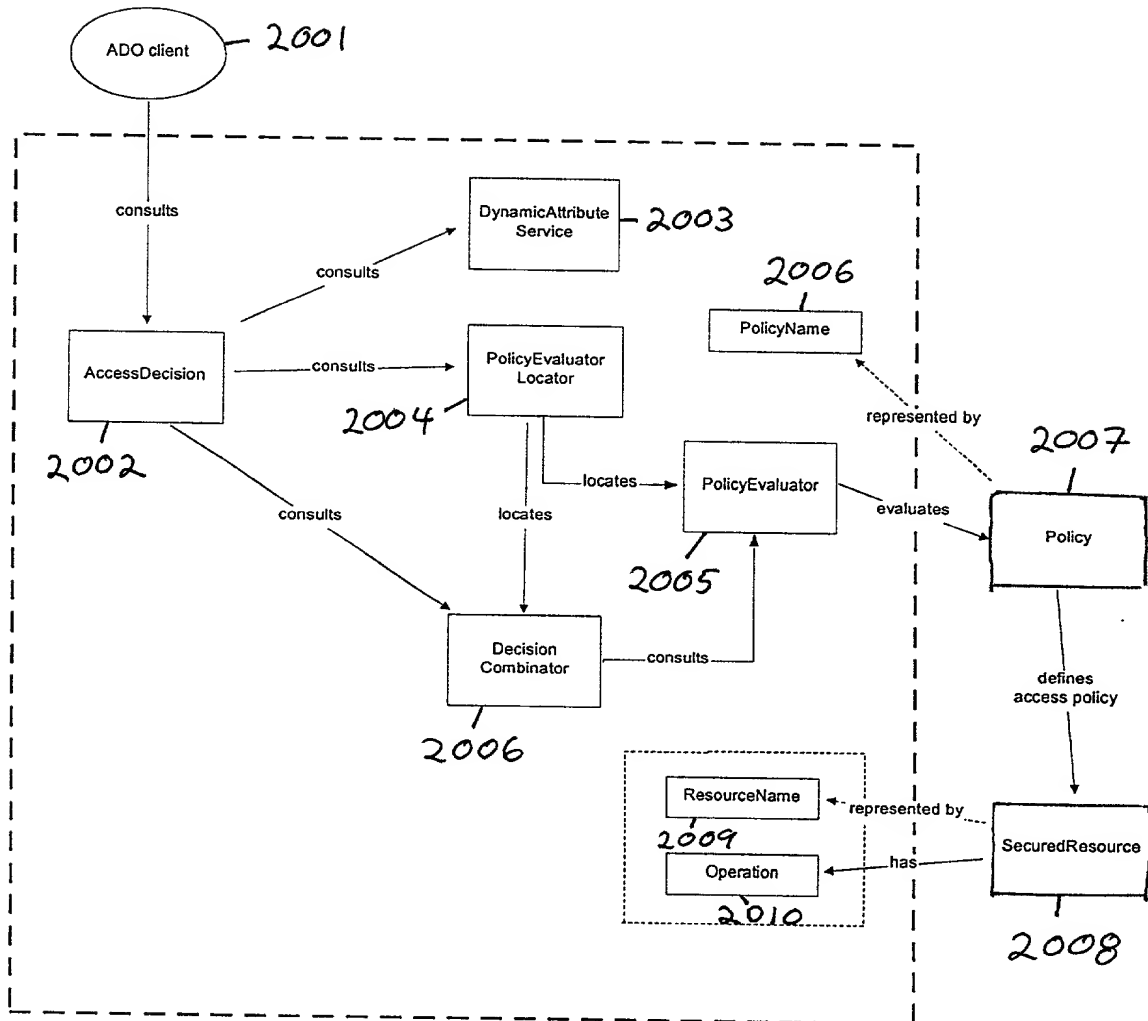


FIG. 20

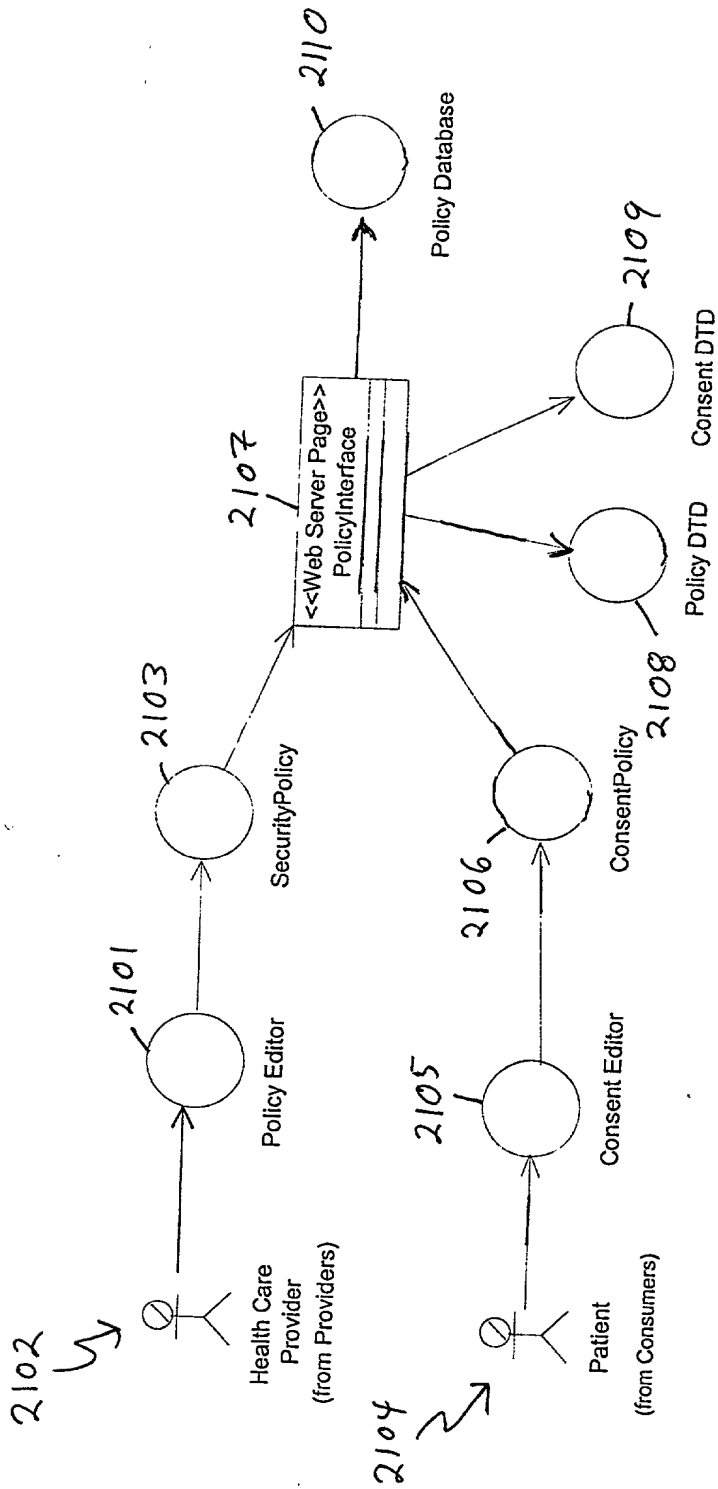


FIG. 21

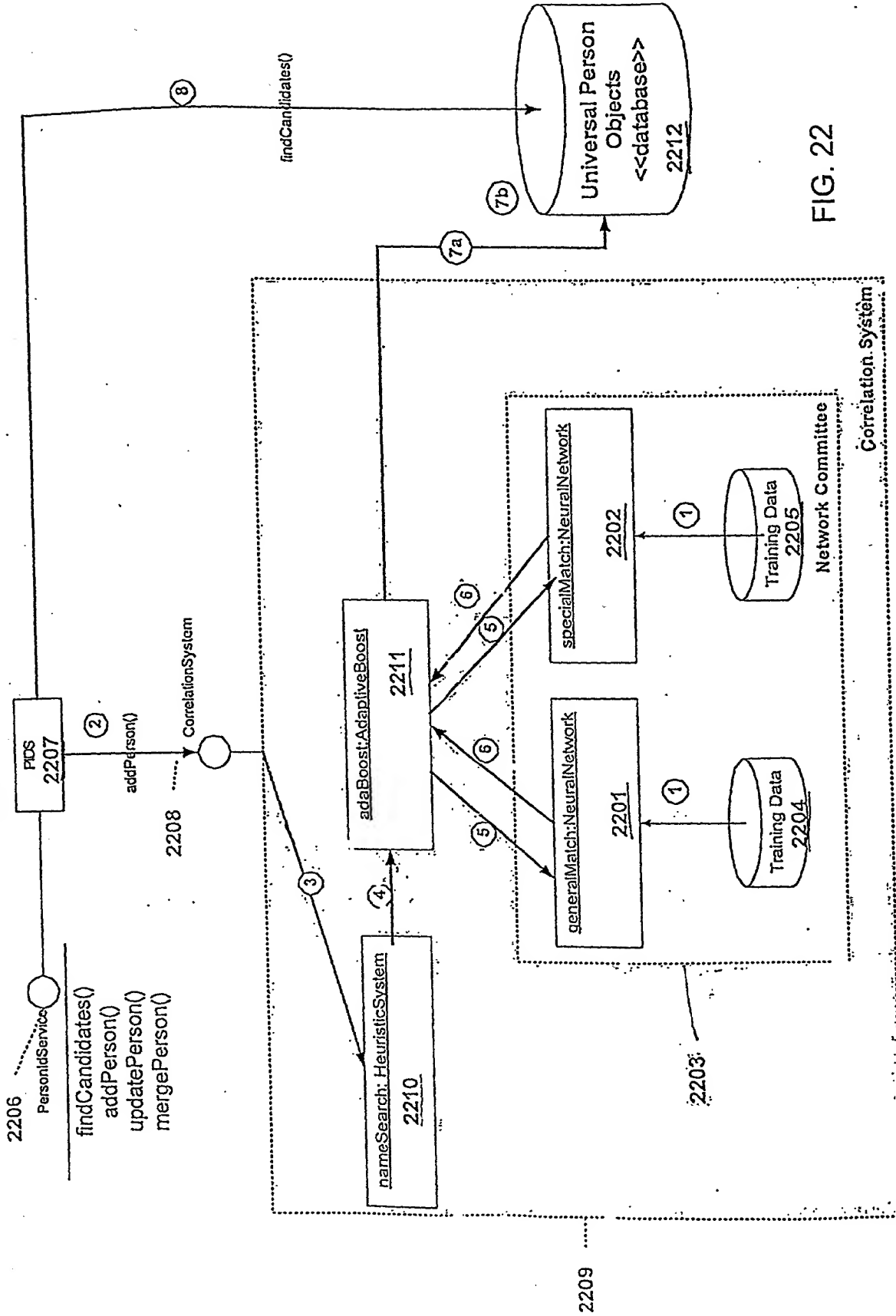


FIG. 22

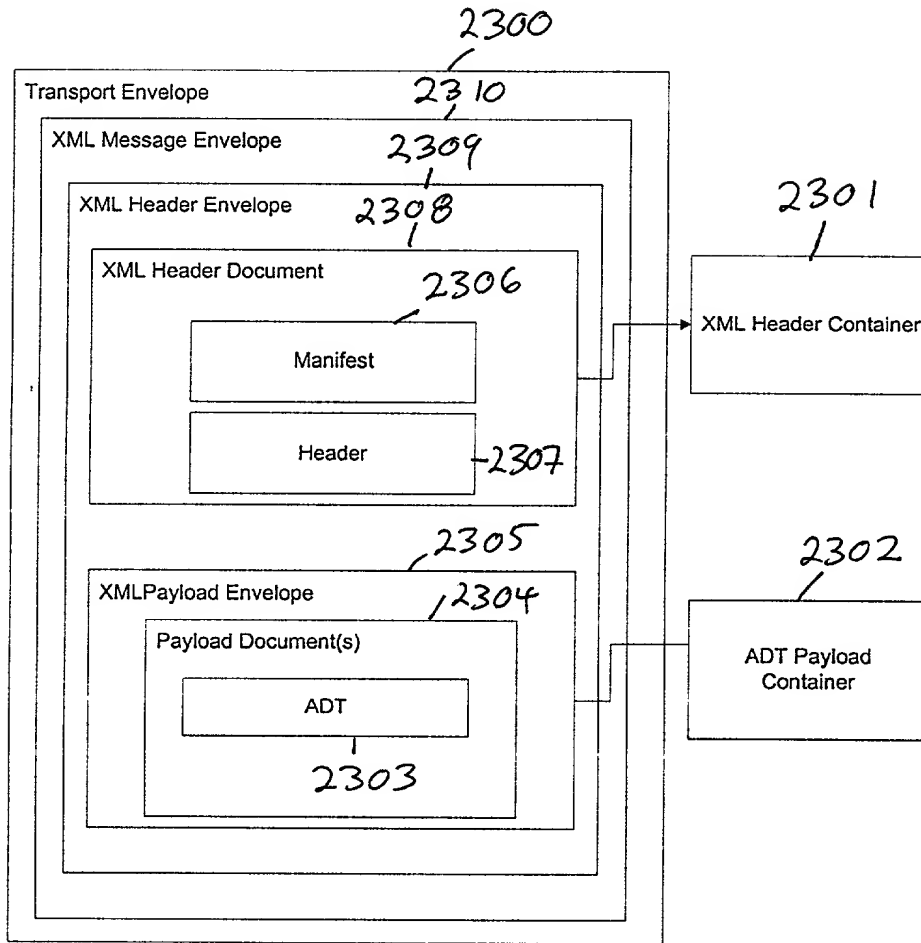


FIG. 23


```

<?xml version ="1.0"?> <schema xmlns = "http://www.w3.org/ 1999/XMLSchema">
<!ELEMENT ebXMLHeader (Manifest , Header )>
<!--ATTLIST ebXMLHeader Version CDATA #FIXED '1.0'
MessageType CDATA #FIXED 'Normal' -->
<!--ELEMENT Manifest (DocumentReference )+>
<!--ELEMENT DocumentReference (Document Description?, DocumentLabel , DocumentId )>
<!--ELEMENT DocumentDescription (#PCDATA )>
<!--ATTLIST DocumentDescription e-dtype NMTOKEN #FIXED 'string' -->
<!--ELEMENT DocumentLabel (#PCDATA )>
<!--ATTLIST DocumentLabel e-dtype NMTOKEN #FIXED 'string' -->
<!--ELEMENT DocumentId (#PCDATA )>
<!--ATTLIST DocumentId e-dtype NMTOKEN #FIXED 'uri' -->
<!--ELEMENT Header (From , To , TPAInfo , MessageData , ReliableMessagingInfo )>
<!--ELEMENT TPAInfo (TPAId , ConversationId , ServiceInterface , Action )>
<!--ELEMENT ServiceInterface (#PCDATA )>
<!--ATTLIST ServiceInterface e-dtype NMTOKEN #FIXED 'string' -->
<!--ELEMENT Action (#PCDATA )>
<!--ATTLIST Action e-dtype NMTOKEN #FIXED 'string' -->
<!--ELEMENT TPAId (#PCDATA )>
<!--ATTLIST TPAId context CDATA 'Undefined'
e-dtype NMTOKEN #FIXED 'uri' -->
<!--ELEMENT ConversationId (#PCDATA )>
<!--ATTLIST ConversationId context CDATA 'Undefined'
e-dtype NMTOKEN #FIXED 'uri' -->
<!--ELEMENT MessageData (MessageId , TimeStamp , RefToMessageId )>
<!--ELEMENT RefToMessageId (#PCDATA )>
<!--ATTLIST RefToMessageId e-dtype NMTOKEN #FIXED 'uuid' -->
<!--ELEMENT MessageId (#PCDATA )>
<!--ATTLIST MessageId e-dtype NMTOKEN #FIXED 'uuid' -->
<!--ELEMENT From (PartyId )>
<!--ELEMENT To (PartyId )>
<!--ELEMENT PartyId (#PCDATA )>
<!--ATTLIST PartyId context CDATA 'Undefined'
e-dtype NMTOKEN #FIXED 'uri' -->
<!--ELEMENT ReliableMessagingInfo EMPTY>
<!--ATTLIST ReliableMessagingInfo DeliverySemantics (OnceAndOnlyOnce | BestEffort )
#FIXED 'BestEffort' -->
<!--ELEMENT RoutingHeader (SenderURI , ReceiverURI , ErrorURI, Timestamp,
SequenceNumber )> <!--ELEMENT SenderURI (#PCDATA )>
<!--ATTLIST SenderURI e-dtype NMTOKEN #FIXED 'uri' -->
<!--ELEMENT ReceiverURI (#PCDATA )>
<!--ATTLIST ReceiverURI e-dtype NMTOKEN #FIXED 'uri' -->
<!--ELEMENT ErrorURI (#PCDATA )>
<!--ATTLIST ErrorURI e-dtype NMTOKEN #FIXED 'uri' -->
<!--ELEMENT TimeStamp (#PCDATA )>
<!--ATTLIST TimeStamp e-dtype NMTOKEN #FIXED 'dateTime' -->
<!--ELEMENT SequenceNumber (#PCDATA )>

```

FIG. 24

```

<!-- Include HL7 Version 2.3.1 datatypes specification -->
<!ENTITY % HL7V231-datatypes PUBLIC "-//HL7//DTD HL7 V2.3.1 datatype
definitions//EN" "datatypes.dtd">
%HL7V231-datatypes;
<!-- Message declaration -->
<!ENTITY % ADT_A08.CONTENT "(MSH,EVN,PID)">
<!ELEMENT ADT_A08 %ADT_A08.CONTENT;>
<!-- Segment declarations -->
<!ENTITY % EVN.CONTENT "(EVN.1?,EVN.2,EVN.4?,EVN.7?)">
<!ELEMENT EVN %EVN.CONTENT;>
<!ENTITY % MSH.CONTENT "(MSH.1,MSH.2,MSH.3?,MSH.4?,MSH.5?,MSH.6?,MSH.7,MSH.8?,MSH.
9,MSH.10,MSH.11,MSH.12,MSH.13?,MSH.14?,MSH.15?,MSH.16?)">
<!ELEMENT MSH %MSH.CONTENT;>
<!ENTITY % PID.CONTENT "(PID.3+,PID.5+,PID.6*,PID.7?,PID.8?,PID.9*,PID.10*,PID.11*
,PID.12?,PID.13*,PID.14*,PID.16?,PID.17?,PID.19?,PID.20?,PI
D.22*,PID.23?,PID.28?)">
<!ELEMENT PID %PID.CONTENT;>
<!-- Field declarations -->
<!-- EVN field declarations -->
<!ELEMENT EVN.1 %EVN.1.CONTENT;>
<!ENTITY % EVN.1.ATTRIBUTES "Item CDATA #FIXED '99'
Table CDATA #FIXED '3'
LongName CDATA #FIXED 'Event Type Code'
Type CDATA #FIXED 'ID'">
<!-- EVN.1 ATTRIBUTES -->
<!-- EVN.2 field declarations -->
<!ELEMENT EVN.2 %EVN.2.CONTENT;>
<!ENTITY % EVN.2.ATTRIBUTES "Item CDATA #FIXED '100'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Recorded Date/Time'
Type CDATA #FIXED 'TS'">
<!-- EVN.2 ATTRIBUTES -->
<!-- EVN.4 field declarations -->
<!-- EVN.4 ATTRIBUTES -->
<!-- EVN.7 field declarations -->
<!-- EVN.7 ATTRIBUTES -->

```

FIG. 25-A

```

<!-- MSH field declarations -->
<!ENTITY % MSH.1.CONTENT "%ST;">
<!ELEMENT MSH.1 %MSH.1.CONTENT;>
<!ENTITY % MSH.1.ATTRIBUTES "Item CDATA #FIXED '1'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Field Separator'
Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.1 %MSH.1.ATTRIBUTES; >
<!ENTITY % MSH.2 .CONTENT "%ST;">
<!ELEMENT MSH.2 %MSH.2.CONTENT;>
<!ENTITY % MSH.2.ATTRIBUTES "Item CDATA #FIXED '2'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Encoding Characters'
Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.2 %MSH.2.ATTRIBUTES; >
<!ENTITY % MSH.3.CONTENT "%HD;">
<!ELEMENT MSH.3 %MSH.3.CONTENT;>
<!ENTITY % MSH.3.ATTRIBUTES "Item CDATA #FIXED '3'
Table CDATA #FIXED '361'
LongName CDATA #FIXED 'Sending Application'
Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.3 %MSH.3.ATTRIBUTES; >
<!ENTITY % MSH.4.CONTENT "%HD;">
<!ELEMENT MSH.4 %MSH.4.CONTENT;>
<!ENTITY % MSH.4.ATTRIBUTES "Item CDATA #FIXED '4'
Table CDATA #FIXED '362'
LongName CDATA #FIXED 'Sending Facility'
Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.4 %MSH.4.ATTRIBUTES; >
<!ENTITY % MSH.5.CONTENT "%HD;">
<!ELEMENT MSH.5 %MSH.5.CONTENT;>
<!ENTITY % MSH.5.ATTRIBUTES "Item CDATA #FIXED '5'
Table CDATA #FIXED '361'
LongName CDATA #FIXED 'Receiving Application'
Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.5 %MSH.5.ATTRIBUTES; >
<!ENTITY % MSH.6.CONTENT "%HD;">
<!ELEMENT MSH.6 %MSH.6.CONTENT;>
<!ENTITY % MSH.6.ATTRIBUTES "Item CDATA #FIXED '6'
Table CDATA #FIXED '362'
LongName CDATA #FIXED 'Receiving Facility'
Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.6 %MSH.6.ATTRIBUTES; >
<!ENTITY % MSH.7.CONTENT "%TS;">
<!ELEMENT MSH.7 %MSH.7.CONTENT;>

```

FIG. 25-B

```

<!ENTITY % MSH.7.ATTRIBUTES "Item CDATA #FIXED '7'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Date/Time Of Message'
Type CDATA #FIXED 'TS'">
<!ATTLIST MSH.7 %MSH.7.ATTRIBUTES; >
<!ENTITY % MSH.8.CONTENT "%ST;">
<!ELEMENT MSH.8 %MSH.8.CONTENT;>
<!ENTITY % MSH.8.ATTRIBUTES "Item CDATA #FIXED '8'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Security'
Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.8 %MSH.8.ATTRIBUTES; >
<!ENTITY % MSH.9.CONTENT "%CM_MSG_TYPE;">
<!ELEMENT MSH.9 %MSH.9.CONTENT;>
<!ENTITY % MSH.9.ATTRIBUTES "Item CDATA #FIXED '9'
Table CDATA #FIXED '76'
LongName CDATA #FIXED 'Message Type'
Type CDATA #FIXED 'CM_MSG_TYPE'">
<!ATTLIST MSH.9 %MSH.9.ATTRIBUTES; >
<!ENTITY % MSH.10.CONTENT "%ST;">
<!ELEMENT MSH.10 %MSH.10.CONTENT;>
<!ENTITY % MSH.10.ATTRIBUTES "Item CDATA #FIXED '10'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Message Control ID'
Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.10 %MSH.10.ATTRIBUTES; >
<!ENTITY % MSH.11.CONTENT "%PT;">
<!ELEMENT MSH.11 %MSH.11.CONTENT;>
<!ENTITY % MSH.11.ATTRIBUTES "Item CDATA #FIXED '11'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Processing ID'
Type CDATA #FIXED 'PT'">
<!ATTLIST MSH.11 %MSH.11.ATTRIBUTES; >
<!ENTITY % MSH.12.CONTENT "%VID;">
<!ELEMENT MSH.12 %MSH.12.CONTENT;>
<!ENTITY % MSH.12.ATTRIBUTES "Item CDATA #FIXED '12'
Table CDATA #FIXED '104'
LongName CDATA #FIXED 'Version ID'
Type CDATA #FIXED 'VID'">
<!ATTLIST MSH.12 %MSH.12.ATTRIBUTES; >
<!ENTITY % MSH.13.CONTENT "%NM;">
<!ELEMENT MSH.13 %MSH.13.CONTENT;>
<!ENTITY % MSH.13.ATTRIBUTES "Item CDATA #FIXED '13'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Sequence Number'

```

FIG. 25-C

```

Type CDATA #FIXED 'NM' ">
<!ATTLIST MSH.13 %MSH.13.ATTRIBUTES; >
<!ENTITY % MSH.14.CONTENT "%ST;">
<!ELEMENT MSH.14 %MSH.14.CONTENT;>
<!ENTITY % MSH.14.ATTRIBUTES "Item CDATA #FIXED '14'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Continuation Pointer'
Type CDATA #FIXED 'ST' ">
<!ATTLIST MSH.14 %MSH.14.ATTRIBUTES; >
<!ENTITY % MSH.15.CONTENT "%ID;">
<!ELEMENT MSH.15 %MSH.15.CONTENT;>
<!ENTITY % MSH.15.ATTRIBUTES "Item CDATA #FIXED '15'
Table CDATA #FIXED '155'
LongName CDATA #FIXED 'Accept Acknowledgment Type'
Type CDATA #FIXED 'ID' ">
<!ATTLIST MSH.15 %MSH.15.ATTRIBUTES; >
<!ENTITY % MSH.16.CONTENT "%ID;">
<!ELEMENT MSH.16 %MSH.16.CONTENT;>
<!ENTITY % MSH.16.ATTRIBUTES "Item CDATA #FIXED '16'
Table CDATA #FIXED '155'
LongName CDATA #FIXED 'Application Acknowledgment Type'
Type CDATA #FIXED 'ID' ">
<!ATTLIST MSH.16 %MSH.16.ATTRIBUTES; >
<!-- PID Field declarations -->
<!ENTITY % PID.3.CONTENT "%CX;">
<!ELEMENT PID.3 %PID.3.CONTENT;>
<!ENTITY % PID.3.ATTRIBUTES "Item CDATA #FIXED '106'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Patient Identifier List'
Type CDATA #FIXED 'CX' ">
<!ATTLIST PID.3 %PID.3.ATTRIBUTES; >
<!ENTITY % PID.5.CONTENT "%XPN;">
<!ELEMENT PID.5 %PID.5.CONTENT;>
<!ENTITY % PID.5.ATTRIBUTES "Item CDATA #FIXED '108'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Patient Name'
Type CDATA #FIXED 'XPN' ">
<!ATTLIST PID.5 %PID.5.ATTRIBUTES; >
<!ENTITY % PID.6.CONTENT "%XPN;">
<!ELEMENT PID.6 %PID.6.CONTENT;>
<!ENTITY % PID.6.ATTRIBUTES "Item CDATA #FIXED '109'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Mother's Maiden Name'
Type CDATA #FIXED 'XPN' ">
<!ATTLIST PID.6 %PID.6.ATTRIBUTES; >

```

FIG. 25-D

```

<!ENTITY % PID.7.CONTENT "%TS;">
<!ELEMENT PID.7 %PID.7.CONTENT;>
<!ENTITY % PID.7.ATTRIBUTES "Item CDATA #FIXED '110'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Date/Time Of Birth'
Type CDATA #FIXED 'TS'">
<!ATTLIST PID.7 %PID.7.ATTRIBUTES; >
<!ENTITY % PID.8.CONTENT "%IS;">
<!ELEMENT PID.8 %PID.8.CONTENT;>
<!ENTITY % PID.8.ATTRIBUTES "Item CDATA #FIXED '111'
Table CDATA #FIXED '1'
LongName CDATA #FIXED 'Administrative Sex'
Type CDATA #FIXED 'IS'">
<!ATTLIST PID.8 %PID.8.ATTRIBUTES; >
<!ENTITY % PID.9.CONTENT "%XPN;">
<!ELEMENT PID.9 %PID.9.CONTENT;>
<!ENTITY % PID.9.ATTRIBUTES "Item CDATA #FIXED '112'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Patient Alias'
Type CDATA #FIXED 'XPN'">
<!ATTLIST PID.9 %PID.9.ATTRIBUTES; >
<!ENTITY % PID.10.CONTENT "%CE;">
<!ELEMENT PID.10 %PID.10.CONTENT;>
<!ENTITY % PID.10.ATTRIBUTES "Item CDATA #FIXED '113'
Table CDATA #FIXED '5'
LongName CDATA #FIXED 'Race'
Type CDATA #FIXED 'CE'">
<!ATTLIST PID.10 %PID.10.ATTRIBUTES; >
<!ENTITY % PID.11.CONTENT "%XAD;">
<!ELEMENT PID.11 %PID.11.CONTENT;>
<!ENTITY % PID.11.ATTRIBUTES "Item CDATA #FIXED '114'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Patient Address'
Type CDATA #FIXED 'XAD'">
<!ATTLIST PID.11 %PID.11.ATTRIBUTES; >
<!ENTITY % PID.12.CONTENT "%IS;">
<!ELEMENT PID.12 %PID.12.CONTENT;>
<!ENTITY % PID.12.ATTRIBUTES "Item CDATA #FIXED '115'
Table CDATA #FIXED '289'
LongName CDATA #FIXED 'County Code'
Type CDATA #FIXED 'IS'">
<!ATTLIST PID.12 %PID.12.ATTRIBUTES; >
<!ENTITY % PID.13.CONTENT "%XTN;">
<!ELEMENT PID.13 %PID.13.CONTENT;>
<!ENTITY % PID.13.ATTRIBUTES "Item CDATA #FIXED '116'

```

FIG. 25-E

```

Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Phone Number - Home'
Type CDATA #FIXED 'XTN'">
<!ATTLIST PID.13  %PID.13.ATTRIBUTES; >
<!ENTITY % PID.14.CONTENT "%XTN;">
<!ELEMENT PID.14 %PID.14.CONTENT;>
<!ENTITY % PID.14.ATTRIBUTES "Item CDATA #FIXED '117'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Phone Number - Business'
Type CDATA #FIXED 'XTN'">
<!ATTLIST PID.14  %PID.14.ATTRIBUTES; >
<!ENTITY % PID.16.CONTENT "%CE;">
<!ELEMENT PID.16 %PID.16.CONTENT;>
<!ENTITY % PID.16.ATTRIBUTES "Item CDATA #FIXED '119'
Table CDATA #FIXED '2'
LongName CDATA #FIXED 'Marital Status'
Type CDATA #FIXED 'CE'">
<!ATTLIST PID.16  %PID.16.ATTRIBUTES; >
<!ENTITY % PID.17.CONTENT "%CE;">
<!ELEMENT PID.17 %PID.17.CONTENT;>
<!ENTITY % PID.17.ATTRIBUTES "Item CDATA #FIXED '120'
Table CDATA #FIXED '6'
LongName CDATA #FIXED 'Religion'
Type CDATA #FIXED 'CE'">
<!ATTLIST PID.17  %PID.17.ATTRIBUTES; >
<!ENTITY % PID.19.CONTENT "%ST;">
<!ELEMENT PID.19 %PID.19.CONTENT;>
<!ENTITY % PID.19.ATTRIBUTES "Item CDATA #FIXED '122'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'SSN Number - Patient'
Type CDATA #FIXED 'ST'">
<!ATTLIST PID.19  %PID.19.ATTRIBUTES; >
<!ENTITY % PID.20.CONTENT "%DLN;">
<!ELEMENT PID.20 %PID.20.CONTENT;>
<!ENTITY % PID.20.ATTRIBUTES "Item CDATA #FIXED '123'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Driver's License Number - Patient'
Type CDATA #FIXED 'DLN'">
<!ATTLIST PID.20  %PID.20.ATTRIBUTES; >
<!ENTITY % PID.22.CONTENT "%CE;">
<!ELEMENT PID.22 %PID.22.CONTENT;>
<!ENTITY % PID.22.ATTRIBUTES "Item CDATA #FIXED '125'
Table CDATA #FIXED '189'
LongName CDATA #FIXED 'Ethnic Group'
Type CDATA #FIXED 'CE'">

```

FIG. 25-F

Parameter	Value	Unit	Parameter	Value	Unit
Initial concentration	1.0	g/L	Initial concentration	1.0	g/L
Initial pH	7.0		Initial pH	7.0	
Temperature	25	°C	Temperature	25	°C
Time	0-120	min	Time	0-120	min
Agitation speed	150	rpm	Agitation speed	150	rpm
Adsorbent dose	0.1-1.0	g/L	Adsorbent dose	0.1-1.0	g/L
Batch adsorption	Yes		Batch adsorption	Yes	
Continuous adsorption	No		Continuous adsorption	No	
Adsorption isotherm	Langmuir		Adsorption isotherm	Langmuir	
Adsorption kinetics	Pseudo-second order		Adsorption kinetics	Pseudo-second order	
Desorption	Yes		Desorption	Yes	
Regeneration	Yes		Regeneration	Yes	
Stability	Yes		Stability	Yes	
Reusability	Yes		Reusability	Yes	
Cost	Low		Cost	Low	
Environmental impact	Low		Environmental impact	Low	
Scalability	Yes		Scalability	Yes	
Biodegradability	Yes		Biodegradability	Yes	
Regeneration efficiency	95%		Regeneration efficiency	95%	
Desorption efficiency	90%		Desorption efficiency	90%	
Stability efficiency	98%		Stability efficiency	98%	
Reusability efficiency	92%		Reusability efficiency	92%	
Cost efficiency	95%		Cost efficiency	95%	
Environmental impact efficiency	90%		Environmental impact efficiency	90%	
Scalability efficiency	98%		Scalability efficiency	98%	
Biodegradability efficiency	95%		Biodegradability efficiency	95%	

Parameter	Value	Unit	Parameter	Value	Unit
Initial concentration	1.0	g/L	Initial concentration	1.0	g/L
Initial pH	7.0		Initial pH	7.0	
Temperature	25	°C	Temperature	25	°C
Time	0-120	min	Time	0-120	min
Agitation speed	150	rpm	Agitation speed	150	rpm
Adsorbent dose	0.1-1.0	g/L	Adsorbent dose	0.1-1.0	g/L
Batch adsorption	Yes		Batch adsorption	Yes	
Continuous adsorption	No		Continuous adsorption	No	
Adsorption isotherm	Langmuir		Adsorption isotherm	Langmuir	
Adsorption kinetics	Pseudo-second order		Adsorption kinetics	Pseudo-second order	
Desorption	Yes		Desorption	Yes	
Regeneration	Yes		Regeneration	Yes	
Stability	Yes		Stability	Yes	
Reusability	Yes		Reusability	Yes	
Cost	Low		Cost	Low	
Environmental impact	Low		Environmental impact	Low	
Scalability	Yes		Scalability	Yes	
Biodegradability	Yes		Biodegradability	Yes	
Regeneration efficiency	95%		Regeneration efficiency	95%	
Desorption efficiency	90%		Desorption efficiency	90%	
Stability efficiency	98%		Stability efficiency	98%	
Reusability efficiency	92%		Reusability efficiency	92%	
Cost efficiency	95%		Cost efficiency	95%	
Environmental impact efficiency	90%		Environmental impact efficiency	90%	
Scalability efficiency	98%		Scalability efficiency	98%	
Biodegradability efficiency	95%		Biodegradability efficiency	95%	


```

<!-- Include HL7 Version 2.3.1 datatypes specification -->
<!ENTITY % HL7V231-datatypes PUBLIC "-//HL7//DTD HL7 V2.3.1 datatype
definitions//EN" "datatypes.dtd">
%HL7V231-datatypes;
<!-- Message declaration -->
<!ENTITY % ADT_A29.CONTENT "(MSH,EVN,PID)">
<!ELEMENT ADT_A29 %ADT_A29.CONTENT;>
<!-- Segment declarations -->
<!ENTITY % EVN.CONTENT "(EVN.1?,EVN.2,EVN.4?,EVN.7?)">
<!ELEMENT EVN %EVN.CONTENT;>
<!ENTITY % MSH.CONTENT "(MSH.1,MSH.2,MSH.3?,MSH.4?,MSH.5?,MSH.6?,MSH.7,MSH.8?,MSH.
9,MSH.10,MSH.11,MSH.12,MSH.13?,MSH.14?,MSH.15?,MSH.16?)">
<!ELEMENT MSH %MSH.CONTENT;>
<!ENTITY % PID.CONTENT "(PID.3+,PID.5+)">
<!ELEMENT PID %PID.CONTENT;>
<!-- Field declarations -->
<!-- EVN field declarations -->
<!ELEMENT EVN.1 %EVN.1.CONTENT;>
<!ENTITY % EVN.1.ATTRIBUTES "Item CDATA #FIXED '99'
Table CDATA #FIXED '3'
LongName CDATA #FIXED 'Event Type Code'
Type CDATA #FIXED 'ID'">
<!-- EVN.1 field declarations -->
<!-- EVN.2 field declarations -->
<!-- EVN.4 field declarations -->
<!-- EVN.7 field declarations -->
<!-- MSH field declarations -->

```

FIG. 26-A

```

<!ENTITY % MSH.1.CONTENT "%ST;">
<!ELEMENT MSH.1 %MSH.1.CONTENT;>
<!ENTITY % MSH.1.ATTRIBUTES "Item CDATA #FIXED '1'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Field Separator'
    Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.1 %MSH.1.ATTRIBUTES; >
<!ENTITY % MSH.2 .CONTENT "%ST;">
<!ELEMENT MSH.2 %MSH.2.CONTENT;>
<!ENTITY % MSH.2.ATTRIBUTES "Item CDATA #FIXED '2'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Encoding Characters'
    Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.2 %MSH.2.ATTRIBUTES; >
<!ENTITY % MSH.3.CONTENT "%HD;">
<!ELEMENT MSH.3 %MSH.3.CONTENT;>
<!ENTITY % MSH.3.ATTRIBUTES "Item CDATA #FIXED '3'
    Table CDATA #FIXED '361'
    LongName CDATA #FIXED 'Sending Application'
    Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.3 %MSH.3.ATTRIBUTES; >
<!ENTITY % MSH.4.CONTENT "%HD;">
<!ELEMENT MSH.4 %MSH.4.CONTENT;>
<!ENTITY % MSH.4.ATTRIBUTES "Item CDATA #FIXED '4'
    Table CDATA #FIXED '362'
    LongName CDATA #FIXED 'Sending Facility'
    Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.4 %MSH.4.ATTRIBUTES; >
<!ENTITY % MSH.5.CONTENT "%HD;">
<!ELEMENT MSH.5 %MSH.5.CONTENT;>
<!ENTITY % MSH.5.ATTRIBUTES "Item CDATA #FIXED '5'
    Table CDATA #FIXED '361'
    LongName CDATA #FIXED 'Receiving Application'
    Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.5 %MSH.5.ATTRIBUTES; >
<!ENTITY % MSH.6.CONTENT "%HD;">
<!ELEMENT MSH.6 %MSH.6.CONTENT;>
<!ENTITY % MSH.6.ATTRIBUTES "Item CDATA #FIXED '6'
    Table CDATA #FIXED '362'
    LongName CDATA #FIXED 'Receiving Facility'
    Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.6 %MSH.6.ATTRIBUTES; >
<!ENTITY % MSH.7.CONTENT "%TS;">
<!ELEMENT MSH.7 %MSH.7.CONTENT;>
<!ENTITY % MSH.7.ATTRIBUTES "Item CDATA #FIXED '7'

```

FIG. 26-B

```

Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Date/Time Of Message'
Type CDATA #FIXED 'TS' ">
<!ATTLIST MSH.7 %MSH.7.ATTRIBUTES; >
<!ENTITY % MSH.8.CONTENT "%ST;">
<!ELEMENT MSH.8 %MSH.8.CONTENT;>
<!ENTITY % MSH.8.ATTRIBUTES "Item CDATA #FIXED '8'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Security'
Type CDATA #FIXED 'ST' ">
<!ATTLIST MSH.8 %MSH.8.ATTRIBUTES; >
<!ENTITY % MSH.9.CONTENT "%CM_MSG_TYPE;">
<!ELEMENT MSH.9 %MSH.9.CONTENT;>
<!ENTITY % MSH.9.ATTRIBUTES "Item CDATA #FIXED '9'
Table CDATA #FIXED '76'
LongName CDATA #FIXED 'Message Type'
Type CDATA #FIXED 'CM_MSG_TYPE' ">
<!ATTLIST MSH.9 %MSH.9.ATTRIBUTES; >
<!ENTITY % MSH.10.CONTENT "%ST;">
<!ELEMENT MSH.10 %MSH.10.CONTENT;>
<!ENTITY % MSH.10.ATTRIBUTES "Item CDATA #FIXED '10'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Message Control ID'
Type CDATA #FIXED 'ST' ">
<!ATTLIST MSH.10 %MSH.10.ATTRIBUTES; >
<!ENTITY % MSH.11.CONTENT "%PT;">
<!ELEMENT MSH.11 %MSH.11.CONTENT;>
<!ENTITY % MSH.11.ATTRIBUTES "Item CDATA #FIXED '11'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Processing ID'
Type CDATA #FIXED 'PT' ">
<!ATTLIST MSH.11 %MSH.11.ATTRIBUTES; >
<!ENTITY % MSH.12.CONTENT "%VID;">
<!ELEMENT MSH.12 %MSH.12.CONTENT;>
<!ENTITY % MSH.12.ATTRIBUTES "Item CDATA #FIXED '12'
Table CDATA #FIXED '104'
LongName CDATA #FIXED 'Version ID'
Type CDATA #FIXED 'VID' ">
<!ATTLIST MSH.12 %MSH.12.ATTRIBUTES; >
<!ENTITY % MSH.13.CONTENT "%NM;">
<!ELEMENT MSH.13 %MSH.13.CONTENT;>
<!ENTITY % MSH.13.ATTRIBUTES "Item CDATA #FIXED '13'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Sequence Number'
Type CDATA #FIXED 'NM' ">

```

FIG. 26-C

```

<!ATTLIST MSH.13 %MSH.13.ATTRIBUTES; >
<!ENTITY % MSH.14.CONTENT "%ST;">
<!ELEMENT MSH.14 %MSH.14.CONTENT;>
<!ENTITY % MSH.14.ATTRIBUTES "Item CDATA #FIXED '14'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Continuation Pointer'
    Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.14 %MSH.14.ATTRIBUTES; >
<!ENTITY % MSH.15.CONTENT "%ID;">
<!ELEMENT MSH.15 %MSH.15.CONTENT;>
<!ENTITY % MSH.15.ATTRIBUTES "Item CDATA #FIXED '15'
    Table CDATA #FIXED '155'
    LongName CDATA #FIXED 'Accept Acknowledgment Type'
    Type CDATA #FIXED 'ID'">
<!ATTLIST MSH.15 %MSH.15.ATTRIBUTES; >
<!ENTITY % MSH.16.CONTENT "%ID;">
<!ELEMENT MSH.16 %MSH.16.CONTENT;>
<!ENTITY % MSH.16.ATTRIBUTES "Item CDATA #FIXED '16'
    Table CDATA #FIXED '155'
    LongName CDATA #FIXED 'Application Acknowledgment Type'
    Type CDATA #FIXED 'ID'">
<!ATTLIST MSH.16 %MSH.16.ATTRIBUTES; >
<!-- PID Field declarations -->
<!ENTITY % PID.3.CONTENT "%CX;">
<!ELEMENT PID.3 %PID.3.CONTENT;>
<!ENTITY % PID.3.ATTRIBUTES "Item CDATA #FIXED '106'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Patient Identifier List'
    Type CDATA #FIXED 'CX'">
<!ATTLIST PID.3 %PID.3.ATTRIBUTES; >
<!ENTITY % PID.5.CONTENT "%XPN;">
<!ELEMENT PID.5 %PID.5.CONTENT;>
<!ENTITY % PID.5.ATTRIBUTES "Item CDATA #FIXED '108'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Patient Name'
    Type CDATA #FIXED 'XPN'">
<!ATTLIST PID.5 %PID.5.ATTRIBUTES; >

```

FIG. 26-D

```

<!-- Include HL7 Version 2.3.1 datatypes specification -->
<!ENTITY % HL7V231-datatypes PUBLIC "-//HL7//DTD HL7 V2.3.1 datatype
definitions//EN" "datatypes.dtd">
%HL7V231-datatypes;
<!-- Message declaration -->
<!ENTITY % ADT_A47.CONTENT "(MSH,EVN,PID,MRG)">
<!ELEMENT ADT_A47 %ADT_A47.CONTENT;>
<!-- Segment declarations -->
<!ENTITY % EVN.CONTENT "(EVN.1?,EVN.2,EVN.4?,EVN.7?)">
<!ELEMENT EVN %EVN.CONTENT;>
<!ENTITY % MSH.CONTENT "(MSH.1,MSH.2,MSH.3?,MSH.4?,MSH.5?,MSH.6?,MSH.7,MSH.8?,MSH.
9,MSH.10,MSH.11,MSH.12,MSH.13?,MSH.14?,MSH.15?,MSH.16?)">
<!ELEMENT MSH %MSH.CONTENT;>
<!ENTITY % PID.CONTENT "(PID.3+,PID.5+,PID.6*,PID.7?,PID.8?,PID.9*,PID.10*,PID.11*
,PID.12?,PID.13*,PID.14*,PID.16?,PID.17?,PID.19?,PID.20?,PI
D.22*,PID.23?,PID.28?)">
<!ELEMENT PID %PID.CONTENT;>
<!ENTITY % MRG.CONTENT "(MRG.1+)">
<!ELEMENT MRG %MRG.CONTENT;>
<!-- Field declarations -->
<!-- EVN field declarations -->
<!ELEMENT EVN.1 %EVN.1.CONTENT;>
<!ENTITY % EVN.1.ATTRIBUTES "Item CDATA #FIXED '99'
Table CDATA #FIXED '3'
LongName CDATA #FIXED 'Event Type Code'
Type CDATA #FIXED 'ID'">
<!ATTLIST EVN.1 %EVN.1.ATTRIBUTES; >
<!ENTITY % EVN.2.CONTENT "%TS;">
<!ELEMENT EVN.2 %EVN.2.CONTENT;>
<!ENTITY % EVN.2.ATTRIBUTES "Item CDATA #FIXED '100'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Recorded Date/Time'
Type CDATA #FIXED 'TS'">
<!ATTLIST EVN.2 %EVN.2.ATTRIBUTES; >
<!ENTITY % EVN.4.CONTENT "%IS;">
<!ELEMENT EVN.4 %EVN.4.CONTENT;>
<!ENTITY % EVN.4.ATTRIBUTES "Item CDATA #FIXED '102'
Table CDATA #FIXED '62'
LongName CDATA #FIXED 'Event Reason Code'
Type CDATA #FIXED 'IS'">
<!ATTLIST EVN.4 %EVN.4.ATTRIBUTES; >
<!ENTITY % EVN.7.CONTENT "%HD;">
<!ELEMENT EVN.7 %EVN.7.CONTENT;>
<!ENTITY % EVN.7.ATTRIBUTES "Item CDATA #FIXED '1534'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Event Facility'

```

FIG. 27-A

```

Type CDATA #FIXED 'HD'">
<!-- EVN.7 field declarations -->
<!-- MRG field declarations -->
<!-- ENTITY % MRG.1.CONTENT "%CX;" -->
<!-- ELEMENT MRG.3 %MRG.1.CONTENT -->
<!-- ENTITY % MRG.1.ATTRIBUTES "Item CDATA #FIXED '211'
      Table CDATA #FIXED '0'
      LongName CDATA #FIXED 'Prior Patient Identifier List'
      Type CDATA #FIXED 'CX'" -->
<!-- MRG.1 field declarations -->
<!-- MSH field declarations -->
<!-- ENTITY % MSH.1.CONTENT "%ST;" -->
<!-- ELEMENT MSH.1 %MSH.1.CONTENT -->
<!-- ENTITY % MSH.1.ATTRIBUTES "Item CDATA #FIXED '1'
      Table CDATA #FIXED '0'
      LongName CDATA #FIXED 'Field Separator'
      Type CDATA #FIXED 'ST'" -->
<!-- MSH.1 field declarations -->
<!-- ENTITY % MSH.2.CONTENT "%ST;" -->
<!-- ELEMENT MSH.2 %MSH.2.CONTENT -->
<!-- ENTITY % MSH.2.ATTRIBUTES "Item CDATA #FIXED '2'
      Table CDATA #FIXED '0'
      LongName CDATA #FIXED 'Encoding Characters'
      Type CDATA #FIXED 'ST'" -->
<!-- MSH.2 field declarations -->
<!-- ENTITY % MSH.3.CONTENT "%HD;" -->
<!-- ELEMENT MSH.3 %MSH.3.CONTENT -->
<!-- ENTITY % MSH.3.ATTRIBUTES "Item CDATA #FIXED '3'
      Table CDATA #FIXED '361'
      LongName CDATA #FIXED 'Sending Application'
      Type CDATA #FIXED 'HD'" -->
<!-- MSH.3 field declarations -->
<!-- ENTITY % MSH.4.CONTENT "%HD;" -->
<!-- ELEMENT MSH.4 %MSH.4.CONTENT -->
<!-- ENTITY % MSH.4.ATTRIBUTES "Item CDATA #FIXED '4'
      Table CDATA #FIXED '362'
      LongName CDATA #FIXED 'Sending Facility'
      Type CDATA #FIXED 'HD'" -->
<!-- MSH.4 field declarations -->
<!-- ENTITY % MSH.5.CONTENT "%HD;" -->
<!-- ELEMENT MSH.5 %MSH.5.CONTENT -->
<!-- ENTITY % MSH.5.ATTRIBUTES "Item CDATA #FIXED '5'
      Table CDATA #FIXED '361'
      LongName CDATA #FIXED 'Receiving Application'
      Type CDATA #FIXED 'HD'" -->

```

FIG. 27-B

```

<!ATTLIST MSH.5 %MSH.5.ATTRIBUTES; >
<!ENTITY % MSH.6.CONTENT "%HD;">
<!ELEMENT MSH.6 %MSH.6.CONTENT;>
<!ENTITY % MSH.6.ATTRIBUTES "Item CDATA #FIXED '6'
    Table CDATA #FIXED '362'
    LongName CDATA #FIXED 'Receiving Facility'
    Type CDATA #FIXED 'HD'">
<!ATTLIST MSH.6 %MSH.6.ATTRIBUTES; >
<!ENTITY % MSH.7.CONTENT "%TS;">
<!ELEMENT MSH.7 %MSH.7.CONTENT;>
<!ENTITY % MSH.7.ATTRIBUTES "Item CDATA #FIXED '7'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Date/Time Of Message'
    Type CDATA #FIXED 'TS'">
<!ATTLIST MSH.7 %MSH.7.ATTRIBUTES; >
<!ENTITY % MSH.8.CONTENT "%ST;">
<!ELEMENT MSH.8 %MSH.8.CONTENT;>
<!ENTITY % MSH.8.ATTRIBUTES "Item CDATA #FIXED '8'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Security'
    Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.8 %MSH.8.ATTRIBUTES; >
<!ENTITY % MSH.9.CONTENT "%CM_MSG_TYPE;">
<!ELEMENT MSH.9 %MSH.9.CONTENT;>
<!ENTITY % MSH.9.ATTRIBUTES "Item CDATA #FIXED '9'
    Table CDATA #FIXED '76'
    LongName CDATA #FIXED 'Message Type'
    Type CDATA #FIXED 'CM_MSG_TYPE'">
<!ATTLIST MSH.9 %MSH.9.ATTRIBUTES; >
<!ENTITY % MSH.10.CONTENT "%ST;">
<!ELEMENT MSH.10 %MSH.10.CONTENT;>
<!ENTITY % MSH.10.ATTRIBUTES "Item CDATA #FIXED '10'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Message Control ID'
    Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.10 %MSH.10.ATTRIBUTES; >
<!ENTITY % MSH.11.CONTENT "%PT;">
<!ELEMENT MSH.11 %MSH.11.CONTENT;>
<!ENTITY % MSH.11.ATTRIBUTES "Item CDATA #FIXED '11'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Processing ID'
    Type CDATA #FIXED 'PT'">
<!ATTLIST MSH.11 %MSH.11.ATTRIBUTES; >
<!ENTITY % MSH.12.CONTENT "%VID;">
<!ELEMENT MSH.12 %MSH.12.CONTENT;>

```

FIG. 27-C

```

<!ENTITY % MSH.12.ATTRIBUTES "Item CDATA #FIXED '12'
  Table CDATA #FIXED '104'
  LongName CDATA #FIXED 'Version ID'
  Type CDATA #FIXED 'VID'">
<!ATTLIST MSH.12  %MSH.12.ATTRIBUTES; >
<!ENTITY % MSH.13.CONTENT "%NM;">
<!ELEMENT MSH.13 %MSH.13.CONTENT;>
<!ENTITY % MSH.13.ATTRIBUTES "Item CDATA #FIXED '13'
  Table CDATA #FIXED '0'
  LongName CDATA #FIXED 'Sequence Number'
  Type CDATA #FIXED 'NM'">
<!ATTLIST MSH.13  %MSH.13.ATTRIBUTES; >
<!ENTITY % MSH.14.CONTENT "%ST;">
<!ELEMENT MSH.14 %MSH.14.CONTENT;>
<!ENTITY % MSH.14.ATTRIBUTES "Item CDATA #FIXED '14'
  Table CDATA #FIXED '0'
  LongName CDATA #FIXED 'Continuation Pointer'
  Type CDATA #FIXED 'ST'">
<!ATTLIST MSH.14  %MSH.14.ATTRIBUTES; >
<!ENTITY % MSH.15.CONTENT "%ID;">
<!ELEMENT MSH.15 %MSH.15.CONTENT;>
<!ENTITY % MSH.15.ATTRIBUTES "Item CDATA #FIXED '15'
  Table CDATA #FIXED '155'
  LongName CDATA #FIXED 'Accept Acknowledgment Type'
  Type CDATA #FIXED 'ID'">
<!ATTLIST MSH.15  %MSH.15.ATTRIBUTES; >
<!ENTITY % MSH.16.CONTENT "%ID;">
<!ELEMENT MSH.16 %MSH.16.CONTENT;>
<!ENTITY % MSH.16.ATTRIBUTES "Item CDATA #FIXED '16'
  Table CDATA #FIXED '155'
  LongName CDATA #FIXED 'Application Acknowledgment Type'
  Type CDATA #FIXED 'ID'">
<!ATTLIST MSH.16  %MSH.16.ATTRIBUTES; >
<!-- PID Field declarations -->
<!ENTITY % PID.3.CONTENT "%CX;">
<!ELEMENT PID.3 %PID.3.CONTENT;>
<!ENTITY % PID.3.ATTRIBUTES "Item CDATA #FIXED '106'
  Table CDATA #FIXED '0'
  LongName CDATA #FIXED 'Patient Identifier List'
  Type CDATA #FIXED 'CX'">
<!ATTLIST PID.3  %PID.3.ATTRIBUTES; >
<!ENTITY % PID.5.CONTENT "%XPN;">
<!ELEMENT PID.5 %PID.5.CONTENT;>
<!ENTITY % PID.5.ATTRIBUTES "Item CDATA #FIXED '108'
  Table CDATA #FIXED '0'

```

FIG. 27-D


```

LongName CDATA #FIXED 'Patient Name'
Type CDATA #FIXED 'XPN'">
<!--ATTLIST PID.5  %PID.5.ATTRIBUTES; >
<!--ENTITY % PID.6.CONTENT "%XPN;">
<!--ELEMENT PID.6 %PID.6.CONTENT;>
<!--ENTITY % PID.6.ATTRIBUTES "Item CDATA #FIXED '109'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Mother&apos;s Maiden Name'
Type CDATA #FIXED 'XPN'">
<!--ATTLIST PID.6  %PID.6.ATTRIBUTES; >
<!--ENTITY % PID.7.CONTENT "%TS;">
<!--ELEMENT PID.7 %PID.7.CONTENT;>
<!--ENTITY % PID.7.ATTRIBUTES "Item CDATA #FIXED '110'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Date/Time Of Birth'
Type CDATA #FIXED 'TS'">
<!--ATTLIST PID.7  %PID.7.ATTRIBUTES; >
<!--ENTITY % PID.8.CONTENT "%IS;">
<!--ELEMENT PID.8 %PID.8.CONTENT;>
<!--ENTITY % PID.8.ATTRIBUTES "Item CDATA #FIXED '111'
Table CDATA #FIXED '1'
LongName CDATA #FIXED 'Administrative Sex'
Type CDATA #FIXED 'IS'">
<!--ATTLIST PID.8  %PID.8.ATTRIBUTES; >
<!--ENTITY % PID.9.CONTENT "%XPN;">
<!--ELEMENT PID.9 %PID.9.CONTENT;>
<!--ENTITY % PID.9.ATTRIBUTES "Item CDATA #FIXED '112'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Patient Alias'
Type CDATA #FIXED 'XPN'">
<!--ATTLIST PID.9  %PID.9.ATTRIBUTES; >
<!--ENTITY % PID.10.CONTENT "%CE;">
<!--ELEMENT PID.10 %PID.10.CONTENT;>
<!--ENTITY % PID.10.ATTRIBUTES "Item CDATA #FIXED '113'
Table CDATA #FIXED '5'
LongName CDATA #FIXED 'Race'
Type CDATA #FIXED 'CE'">
<!--ATTLIST PID.10 %PID.10.ATTRIBUTES; >
<!--ENTITY % PID.11.CONTENT "%XAD;">
<!--ELEMENT PID.11 %PID.11.CONTENT;>
<!--ENTITY % PID.11.ATTRIBUTES "Item CDATA #FIXED '114'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Patient Address'
Type CDATA #FIXED 'XAD'">
<!--ATTLIST PID.11  %PID.11.ATTRIBUTES; >

```

FIG. 27-E

```

<!ENTITY % PID.12.CONTENT "%IS;">
<!ELEMENT PID.12 %PID.12.CONTENT;>
<!ENTITY % PID.12.ATTRIBUTES "Item CDATA #FIXED '115'
    Table CDATA #FIXED '289'
    LongName CDATA #FIXED 'County Code'
    Type CDATA #FIXED 'IS'">
<!ATTLIST PID.12 %PID.12.ATTRIBUTES; >
<!ENTITY % PID.13.CONTENT "%XTN;">
<!ELEMENT PID.13 %PID.13.CONTENT;>
<!ENTITY % PID.13.ATTRIBUTES "Item CDATA #FIXED '116'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Phone Number - Home'
    Type CDATA #FIXED 'XTN'">
<!ATTLIST PID.13 %PID.13.ATTRIBUTES; >
<!ENTITY % PID.14.CONTENT "%XTN;">
<!ELEMENT PID.14 %PID.14.CONTENT;>
<!ENTITY % PID.14.ATTRIBUTES "Item CDATA #FIXED '117'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'Phone Number - Business'
    Type CDATA #FIXED 'XTN'">
<!ATTLIST PID.14 %PID.14.ATTRIBUTES; >
<!ENTITY % PID.16.CONTENT "%CE;">
<!ELEMENT PID.16 %PID.16.CONTENT;>
<!ENTITY % PID.16.ATTRIBUTES "Item CDATA #FIXED '119'
    Table CDATA #FIXED '2'
    LongName CDATA #FIXED 'Marital Status'
    Type CDATA #FIXED 'CE'">
<!ATTLIST PID.16 %PID.16.ATTRIBUTES; >
<!ENTITY % PID.17.CONTENT "%CE;">
<!ELEMENT PID.17 %PID.17.CONTENT;>
<!ENTITY % PID.17.ATTRIBUTES "Item CDATA #FIXED '120'
    Table CDATA #FIXED '6'
    LongName CDATA #FIXED 'Religion'
    Type CDATA #FIXED 'CE'">
<!ATTLIST PID.17 %PID.17.ATTRIBUTES; >
<!ENTITY % PID.19.CONTENT "%ST;">
<!ELEMENT PID.19 %PID.19.CONTENT;>
<!ENTITY % PID.19.ATTRIBUTES "Item CDATA #FIXED '122'
    Table CDATA #FIXED '0'
    LongName CDATA #FIXED 'SSN Number - Patient'
    Type CDATA #FIXED 'ST'">
<!ATTLIST PID.19 %PID.19.ATTRIBUTES; >
<!ENTITY % PID.20.CONTENT "%DLN;">
<!ELEMENT PID.20 %PID.20.CONTENT;>
<!ENTITY % PID.20.ATTRIBUTES "Item CDATA #FIXED '123'

```

FIG. 27-F

```

Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Driver&apos;s License Number - Patient'
Type CDATA #FIXED 'DLN' ">
<!ATTLIST PID.20  %PID.20.ATTRIBUTES; >
<!ENTITY % PID.22.CONTENT "%CE;">
<!ELEMENT PID.22 %PID.22.CONTENT;>
<!ENTITY % PID.22.ATTRIBUTES "Item CDATA #FIXED '125'
Table CDATA #FIXED '189'
LongName CDATA #FIXED 'Ethnic Group'
Type CDATA #FIXED 'CE' ">
<!ATTLIST PID.22  %PID.22.ATTRIBUTES; >
<!ENTITY % PID.23.CONTENT "%ST;">
<!ELEMENT PID.23 %PID.23.CONTENT;>
<!ENTITY % PID.23.ATTRIBUTES "Item CDATA #FIXED '126'
Table CDATA #FIXED '0'
LongName CDATA #FIXED 'Birth Place'
Type CDATA #FIXED 'ST' ">
<!ATTLIST PID.23  %PID.23.ATTRIBUTES; >
<!ENTITY % PID.28.CONTENT "%CE;">
<!ELEMENT PID.28 %PID.28.CONTENT;>
<!ENTITY % PID.28.ATTRIBUTES "Item CDATA #FIXED '739'
Table CDATA #FIXED '212'
LongName CDATA #FIXED 'Nationality'
Type CDATA #FIXED 'CE' ">
<!ATTLIST PID.28  %PID.28.ATTRIBUTES; >

```

FIG. 27-G

Universal Person Object

Transient Class Hierarchy

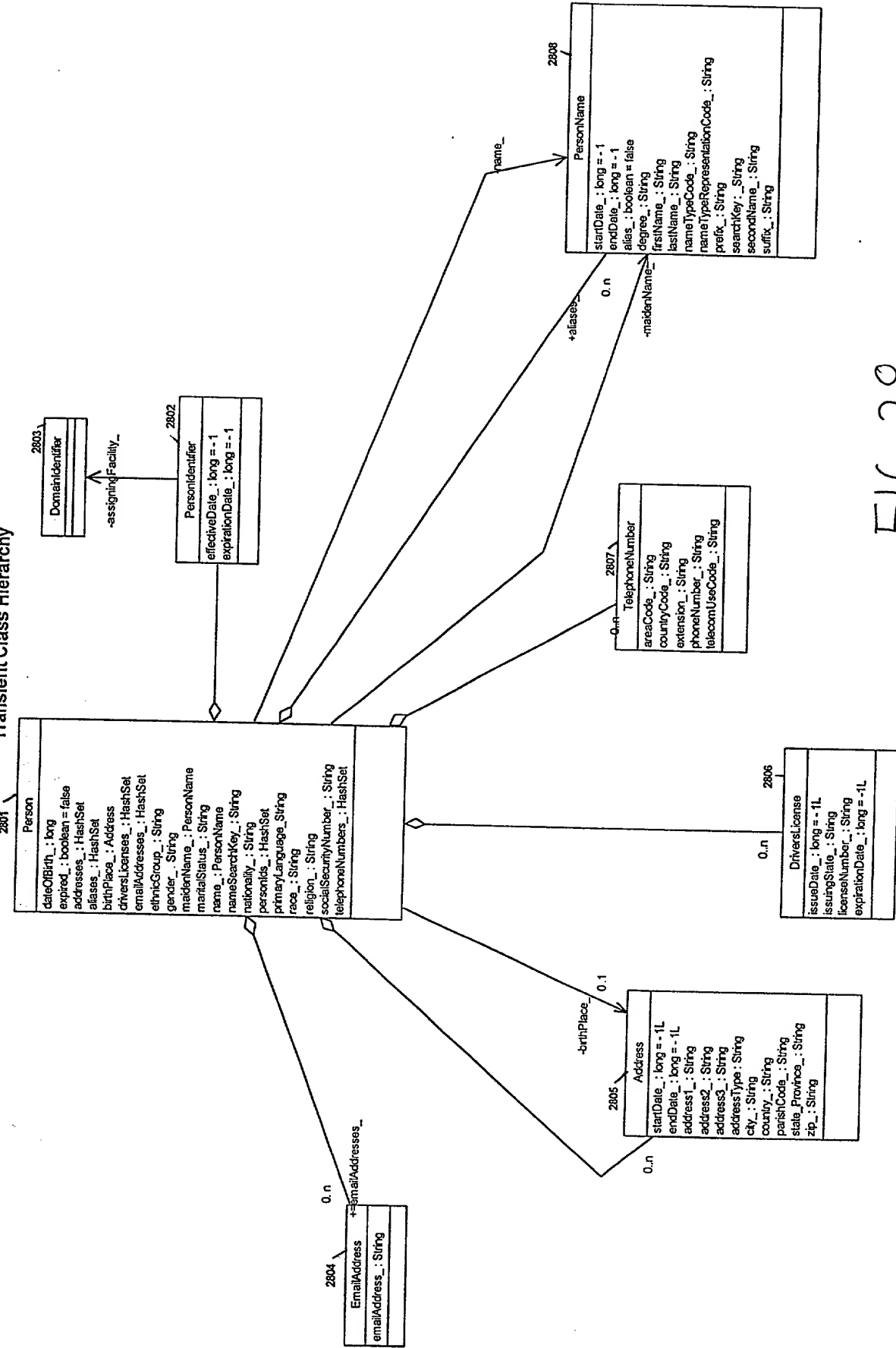


FIG. 28

Page 99 of 100

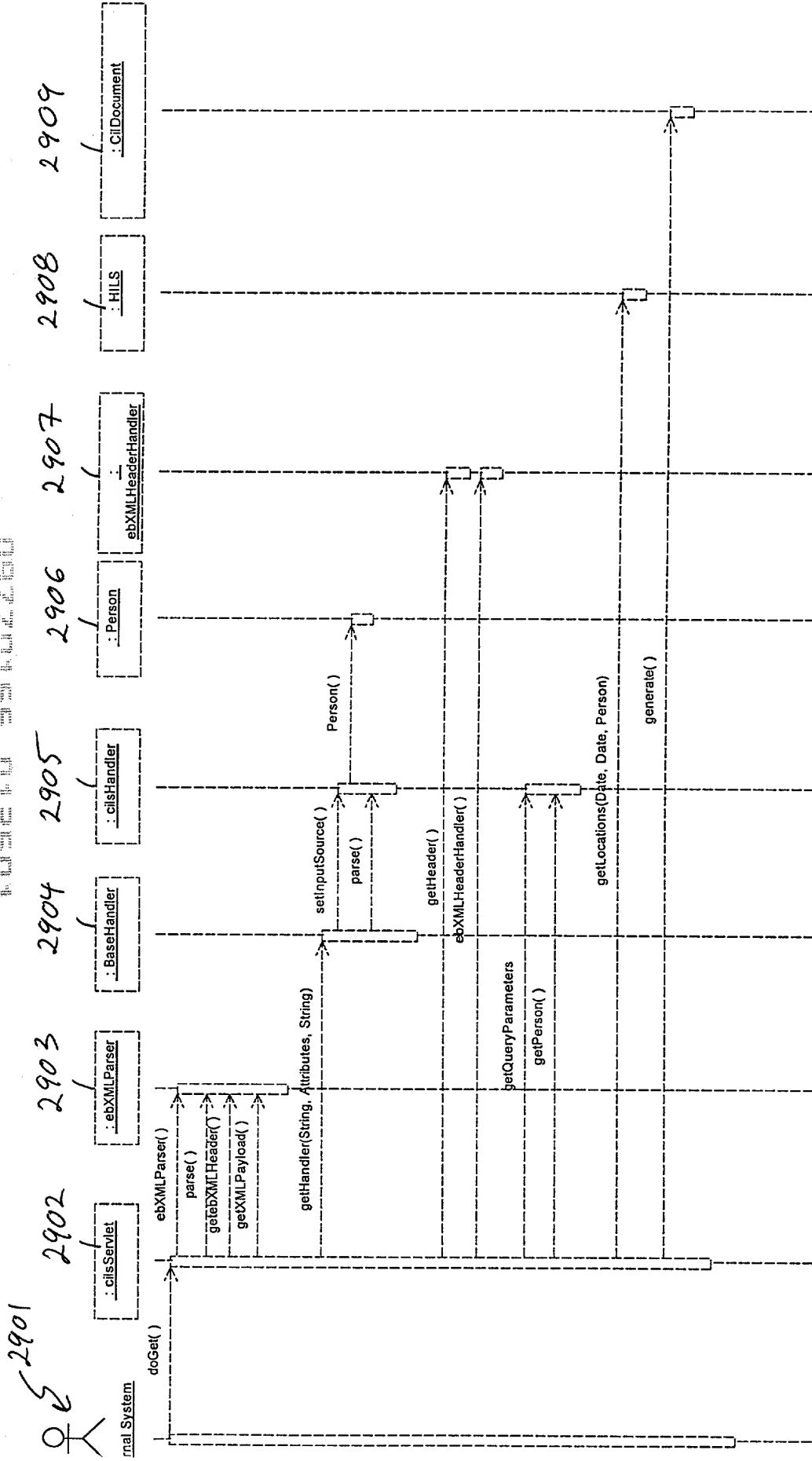


FIG. 29

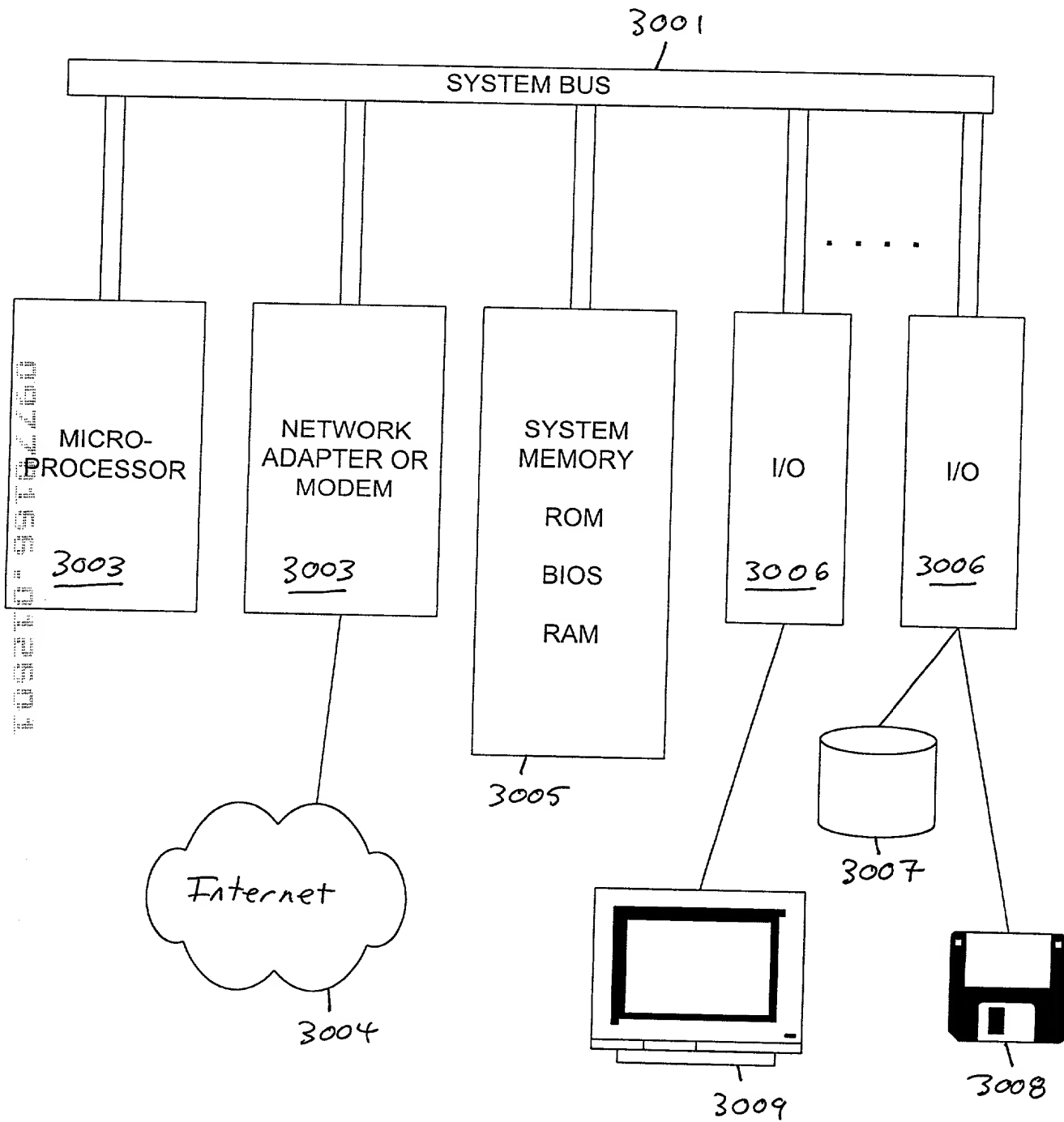


FIG. 30